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"Qui Docet Discit."

SIX CASES OF ANEURISM.* SELECT TOPICS OF MODERN SURGERY, ILLUSTRATED BY CASES FROM THE HOSPITAL SERVICE AND PRIVATE PRACTICE OF DRS. CHR. FENGER AND E. W. LEE, CHICAGO, ILL.

As the title indicates, this paper is simply a casuistic report, which we desire to lay before the Society. The number of cases is so small, and their nature so different, that the subject of aneurisms in general cannot be considered here.

We do not need to state that while the general term, aneurism, is perfectly correct anatomically, it is altogether too general when location, symptomatology, therapeutics and cure are taken into consideration. The necessity of individualization in this respect has been mentioned in only very few of even the more elaborate handbooks of surgery. Attention must be given to this important point in future. This individualization can be accomplished only by a large number of casuistic reports, and to this end our paper of to-night is intended as a small contribution. To counterbalance the necessary dryness of the bare casuistic reports, we have added some remarks intended to point out some of the practical points of unusual interest, to which our attention has been directed in some of the cases.

CASE I.—Traumatic popliteal aneurism (Fenger, Chicago, 1881).

Synopsis.—Traumatic left popliteal aneurism from revolver bullet, wound passing through the artery. No external hæmorrhage. Ligation of the popliteal artery *in loco.* Gangrene. Amputation at upper third of thigh. Death.

J. M. A laborer, 35 years of age, was brought to Cook county Hospital July 5th, 1881, and placed under Dr. Fenger's care. On admission he gave the following history:

July 4th, while walking across State street, he felt a sudden pain in the left popliteal region; simultaneously he heard the report of a revolver which had been fired from a group of boys on the sidewalk. He was able to walk home, but pain and a feeling of tension in the popliteal space soon rendered walking difficult and compelled him to lie down. A small wound could be seen at the lower extremity of the outer hamstring tendon; from which, however, there was only very slight hæmorrhage. The pain and swelling increased during the night, and the next morning, as he was unable to walk, he was brought to the hospital.

Examination revealed a revolver bullet wound, an inch above the head of the fibula, close to the tendon of the biceps. Severe pain in the leg, which is slightly flexed at the knee, and the slightest movement of which is painful. The capsule contains no fluid and there is no swelling on the anterior side of the limb, but the popliteal space is swollen, tense and tender. The swelling extends downwards through the upper third of the calf, and upward through the lower third of the posterior side of the thigh.

The hand applied over the popliteal space feels distinct pulsation, and the stethoscope reveals an unmistakable aneurismal bruit, most pronounced in the middle of the popliteal space.

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* Read before the Chicago Biological Society, February 1st, 1882.

Diagnosis : Traumatic aneurism of the popliteal artery from revolver bullet wound. Plan of operation: Ligation of the wounded artery *in loco.*

July 5th.—In the afternoon the patient was anæsthetized, turned on his face, and Esmarch's bandage applied as high as the upper third of the femur where the elastic constriction was made. A longitudinal incision, four inches in length, was made in the middle line of the popliteal space, through the skin, subcutaneous tissue and fascia. Below the latter, in the adipose tissue surrounding the large nerves and vessels, was a profuse extravasation of dark, clotted blood, extending above and below the ends of the incision. A probe introduced through the entrance opening of the bullet wound could be passed transversely through the popliteal space from the external to the median border, where it was stopped in the muscular mass of the internal head of the gastrocnemius. Leaving the probe in this position careful dissection was made with the dissecting forceps, so as to avoid injuring any vessels, and after the removal of several small clots it was found that the nerve and the popliteal vein were intact, but the artery was perforated twice, one opening being lateral and one median. Through these openings the probe passed transversely through the lumen of the artery. At the end of the wound, in the inner head of the gastrocnemius, a small revolver bullet, calibre 32, was found and extracted. The artery was now easily isolated and ligated above and below the two perforations, the ligatures being at a distance of less than half an inch from each other. No signs of suppuration were to be seen in the tissues after the removal of the clots. The constriction around the femur was removed; a trifling hæmorrhage followed, which was checked by irrigation; a drainage-tube inserted; the wound united; Lister dressing applied; the leg placed in a Bonnet splint, slightly flexed at the knee, and suspended in an elevated position.

July 6th.—Pulse 108; temperature 102.1°. Patient has been restless during the night. The crus and foot are somewhat swollen and painful, but warm, and have a slight yellowish discoloration.

July 7th.—Pulse 110; temperature 102.5°. The swelling of the foot and crus has increased. The skin has a diffuse yellowish-brown discoloration, and several brownish-red bullæ, from the size of a pea to that of a hazel-nut, are spread over its surface. The discoloration now extends from the crus, up over the medial line of the knee-joint, along the track of the vena saphena major. Dr. Fenger proposed to the patient immediate amputation in the middle of the thigh, as a possible means of saving his life from the rapidly spreading moist gangrene, but the patient positively refused to submit to the operation, as he had no pain and was able to move the foot.

July 8th.—Pulse 120, weak; temperature 102°. The discoloration along the vena saphena major now extends to the upper third of the thigh. The patient now consented to amputation, and consequently amputation at the upper third of the thigh was performed, with a large external and small internal flap, taken from apparently healthy tissue. The operation was accompanied by the usual amount of hæmorrhage. The stump was dressed antiseptically.

July 9th.—Pulse 130; temperature 101°. The patient rallied in due time after the operation and slept well during the night. With the exception of weakness he feels well. As some brownish discoloration of the skin was seen, in and above the inguinal region, the amputation wound was dressed, and showed gangrene spreading along the medial surface of the amputation stump.

July 10th.—During yesterday afternoon the patient became weaker, collapsed and died at 9 pm.

The autopsy demonstrated the usual signs of moist gangrene, namely, a little cloudy serum infiltrating the subcutaneous tissue of the thigh and lower half of the left side of the abdomen; fluid blood; heart flabby from cloudy swelling; flabby and cloudy spleen, liver and kidneys; all the other organs normal.

It was the conservative tendency of modern surgery, relying upon the antiseptic method, taken together with the rules laid down in modern works on surgery, that led Dr. Fenger to attempt to save the patient's limb in this case, by double ligature *in loco.*

A discussion in the French Surgical Society in 1875 (Virchow-Horsch Jahresbericht, Band II, Abtheilung II, page 338, 1876,) concerning the treatment of wounds of the large arteries, showed that the opinion of the majority of those present was that immediate double ligature of the wounded artery should be made in cases uncomplicated by injuries to, or inflammations of the surrounding tissues.

Two cases of gunshot wound of the femoral artery, one from pistol bullet and one from buckshot were reported from Volkmann's Klinik, by Kraske, at the Eighth Congress of German surgeons (Virchow-Horsch Jahresbericht, Band II, Heft. II, page 307, 1880) in each of which perfect and speedy recovery, with conservation of the limb, followed immediate double ligature. These results seem to strengthen the advisability of conservative surgery in such cases.

The popliteal artery has always had a bad reputation, on account of the dangerous character of its injuries, and Poland's opinion, (Guy's Hospital Reports, 1860,) corroborated by Pollock (Guy's Hospital Reports, 1866), after the treatment in all, of ten cases, was that amputation was preferable to either double ligature *in loco*, or, ligature of the femoral artery, and that the amputation should be primary, as amputation after gangrene has commenced is always an uncertain operation. Only two of the cases cited by this author, in which immediate double ligature was made, recovered; in three cases gangrene followed.

The larger standard hand-books on surgery; Pitha, Billroth, and Erichsen, in the consideration of wounds of the popliteal artery, rather recommend than condemn the ligature *in loco*, in suitable cases, which must, of course, be a minority.

In looking over the literature for the last fifteen years, we have been able to find only one case, besides the two above-mentioned cases reported by Poland, in which the treatment of a wounded popliteal artery, by ligature *in loco* was successful in saving the limb. This case was reported by Annandale (*Lancet*, April 24, 1875). A boy ten years old suffered a punctured wound in the popliteal. Three months later a pulsating tumor was noticed, which, as was seen at the operation, was an arterio-venous aneurism. The operation of double ligature of both artery and vein in the popliteal space, under antiseptic precautions, was followed by recovery in four weeks. This case stands as an exception, and is not at all comparable to cases of acute diffuse traumatic aneurisms, from injuries, for which, as far as we know, amputation is still the only safe method of treatment.

It has been advised in such cases to try to save the limb by ligature of the femoral artery. Rabe (*Deutsche Zeitschrift fur Chirurgie*, Band V, 1875, page 154), reports eleven cases, with only two deaths, nine recoveries, no gangrene and no secondary amputation.

The value of these favorable results of the ligation of the femoral for rupture of the popliteal artery is seriously impaired by the reports from the Franco-German war, in which two cases of gunthot wound of the popliteal artery are on record. One reported by Fischer (*Deutsche Zeitschrift fur Chirurgie*, Band I, 1872, page 264), and one by MacCormac (*Virchow-Hirsch Jahersbericht*, 1872, Band II, Heft II), in which ligation of the femoral artery did not stop the hæmorrhage from the popliteal artery. A similar case is reported by Caspary (*Virchow-Hirsch Jahresbericht*, 1870, Band II, Heft II, page 348), of traumatic aneurism in the popliteal space, twenty-seven days after a gunshot wound.

The femoral artery was ligated. Three days later secondary hæmorrhage set in from the popliteal wound, necessitating amputation.

The absurdity of attempting to compare the ligation of the popliteal artery in cases of spontaneous aneurism, with the same treatment in cases of traumatic aneurism is shown by one of Rabe's statistical tables, in which ten cases of Antyllus' operation, namely, double ligation of the artery *in loco* and extirpation of the sac, are reported, with six recoveries, and the appearance of gangrene in the other four cases.

There is one point in regard to the ligation of the large vessels, of which very little notice has as yet been taken, but which may in the future be adopted as a means of avoiding the gangrene subsequent to ligation. An extended series of experiments on rabbits, published by Meyer (*Bayousches Artzliches IntelligenzBlatt*, No. 4, Jan. 24, 1868), shows the remarkable fact that the simultaneous ligature of the large vein and artery in the same place was never followed by gangrene, nor by any other grave symptoms, such as inflammation or secondary hæmorrhage. The case of Annandale, mentioned above, is in conformity with these facts. More extended experiments on the large animals are, however, desirable for the elucidation of this important question.

CASE II.—Spontaneous Popliteal Aneurism. Fenger, Chicago, 1880.

Synopsis.—Spontaneous left popliteal aneurism—ligation of left femoral artery in middle of thigh—apparent recovery. Two months and a half later, rapidly increasing, fluctuating, nonpulsating tumor in popliteal space—aspiration of thin viscid blood, no effect. Two weeks later, radical operation, accompanied by uncontrollable venous hæmorrhage—double ligation of popliteal vein,—complete recovery in two months.

John Smith, a Scotch bricklayer, fifty years of age, noticed in March, 1880, a tumor in the left popliteal space, commencing in a small sub-cutaneous lump which was movable. This gradually increased in size until it was as large as a hen's egg, and caused him so much pain that he was unable to walk. After he had been in this condition for about six weeks, he was seen by Drs. Lee and Fenger, who found on examination, an aneurism in the left popliteal space of about the size of a hen's egg, with marked pulsation and bruit. Dr. Lee tied the left femoral artery in the middle of the thigh, and the patient was sent to Cook County Hospital for after treatment. The pulsation and bruit ceased; the wound healed by first intention and an elastic bandage was kept on the left knee. The patient gradually became able to walk without pain, and was discharged from the hospital June 5.

Shortly afterwards he went to work, the swelling in the popliteal space returned, accompanied by pain in walking, and he consequently re-entered the hospital June 16, and was placed under the care of Dr. Fenger.

On examination, a small fluctuating tumor was found at the upper margin of the left popliteal space. There was no bruit and no pulsation. The skin covering the apex of the tumor was brownish in color and thin, so that a perforation might be expected at this point. By the use of an exploring needle, a little thick, slimy dark-red fluid was evacuated, which, on microscopical examination was found to contain numerous red blood corpuscles, but no pus cells. An elastic bandage was applied, the leg placed in an elevated position, and absolute rest in bed ordered.

June 29th.—The tumor has not diminished in size.

July 6th.—The tumor is considerably enlarged and very painful.

July 8th.—The tumor was aspirated and about six ounces of dark-red, bloody serum withdrawn, and the elastic bandage reapplied.

July 11th.—The cavity of the tumor has filled again.

July 20th.—The tumor is considerably enlarged, occupying the whole of the popliteal space, to an extent of about seven inches in length and extending on either side beyond the hamstring tendons. Fluctuation can be felt both external and internal to these tendons, these lesser cavities communicating with the main cavity. As the tumor was steadily enlarging and dissecting through the loose connective tissue between the muscles and tendons of the popliteal space, and at the same time threatening to break through the skin, Dr. Fenger resolved upon the radical operation as the only resort for recovery, the patient having positively refused amputation.

July 22nd.--The patient was anæsthetized with ether. A longitudinal incision ten inches in length was made in the median line of the popliteal space, though the skin and the wall of the cavity, a quantity of the above described dark-red, viscid bloody fluid was evacuated, and it was then seen that the walls of the cavity consisted of the structures constituting the popliteal space ; arteries, veins, muscles and tendons. These were all covered with a layer of gelatinous, soft and friable substance, one to three millimeters in thickness. This membrane was removed from the main and lesser cavities with the sharp spoon and a considerable hæmorrhage followed. The blood was venous, and poured out rapidly from even the smallest openings, which it was impossible to take up and ligate. Irrigation with a warm five per cent. solution of carbolic acid had no influence over the hæmorrhage. As the bleeding was most profuse in the middle of the popliteal space, where the blood rushed out through some larger openings, the popliteal vein was isolated and ligated in two places, about three inches apart, whereupon the greater part of the hæmorrhage ceased. There was still however a considerable oozing of blood from the periphery of the cavity, which was overcome by irrigation with a strong solution of chloride of zinc. A large drainage tube was then inserted though the entire length of the cavity, the wound united, and Lister dressing applied.

July 23d.—Very little hæmorrhage. The wound was washed out and dressed.

July 24th.—No hæmorrhage.

July 27th.—No hæmorrhage. In several places along the edges of the incision wound, small pieces of skin have sloughed off and are separating.

August 4th.—Drainage tube removed.

August 11th.—the entire cavity is closed and the wound presents a solid, healthy granulating surface.

September 20th.—The wound is entirely healed. The dressing was removed, a roller bandage applied and the patient out of bed and around on crutches.

October 19th—The patient was discharged from the hospital. At this time he could walk on crutches, but was able to bear very little weight on the foot.

March 25th, 1881.—The patient came to Dr. Fenger's office for examination. He can walk without a cane. The movements of the knee-joint are free, but he cannot exercise the utmost extension on account of the contraction of the cicatricial tissue in the popliteal space. In the popliteal space is seen a large reddish cicatrix about five inches long, and from quarter to half an inch in breadth. In the center of this scar is a superficial excoriation about half an inch in diameter, which causes the patient no pain. There is some œdema around the ankles at night, after he has been walking about all day long, but it disappears before morning. The foot feels somewhat numb, but otherwise the limb is in its normal condition.

The interesting feature of this case, was the constantly enlarging cavity, filled with thin, viscid blood. The exact pathological nature of this cavity was not shown even by the operation, which occurred two months and a half after the ligation of the femoral artery. It was not a common varix, because the blood was considerably thinner, that is, mixed with serous or synovial fluid ; but it was evident that the popliteal vein was involved, as the severe hæmorrhage during the operation could not be checked until a double ligature had been passed around the vein.

From an excellent article by Dr. S. W.

Gross (*American Journal of the Medical Sciences*, January, page 19; April, page 305, 1867), we learn that gangrene very seldom follows ligature of the large veins. Secondary hæmorrhage or phlebitis are more common sequelæ of this operation.

It is more than probable that the secondary hæmorrhage is due to the same cause as the phlebitis; namely, suppuration in the wound leading to the ligated vein.

As antiseptic precautions in operations and after-treatment will overcome both of these complications, the surgery of the future should allow us, unhesitatingly to perform ligation of the large veins whenever indicated.

Case III.—Aneurism of the External Iliac (Fenger, 1881).

Synopsis.—Left inguinal aneurism of three month's standing.—Dry gangrene of little toe.—Ligation of external iliac.—Progress of gangrene.—Secondary hæmorrhage, after thirteen days.—Ligation of common iliac.—Death five days later.

E. A. B., aged fifty-five, a speculator on the Board of Trade, came under Dr. Fenger's care July 11, 1881. The patient had never suffered from any serious disease except syphilis, contracted seven years ago. About a year ago, without any perceptible cause, he suffered from neuralgic pains in the toes of the left foot, accompanied by slight swelling, which, with the pain, subsided after a time, but reappeared thereafter at irregular intervals. These symptoms, however, were not so severe as to prevent him from walking around and attending to his business as usual.

About three months ago, April 20th, when pulling on his boots, he was attacked by pain in the region of the left Poupart's ligament, which was so severe as to oblige him to return to bed. After the use of cold applications, the pain subsided, and he was again able to walk around. A month later a tumor appeared in the left groin. This gradually increased in size, and commenced to pulsate, and at the same time stiffness and pain along the entire left limb rendered walking impossible.

On June 20th, Dr. G. W. Tucker was called in, and found a pulsating tumor in the left inguinal region, covered by Poupart's ligament, extending from three quarters of an inch above the latter to two inches below it. The tumor was oval in form, and about three inches in its longest diameter, in the track of the external iliac and femoral arteries, and about two inches in its transverse diameter. There was a distinct aneurismal bruit, and pressure on the external iliac above the tumor diminished the size of the latter, and caused the cessation of the pulsations.

July 10th.—Dr. Fenger was called in consultation. He found the aneurism as above described ; no swelling of the limb, but dry gangrene of the little toe, and dark discolorations around the nails of the third and fourth toes. An operation was decided upon, and approved by the patient.

July 12th.—Dr. Fenger, assisted by Dr. E. W. Lee, Dr. S. D. Jacobson and the House Staff of Cook County Hospital, ligated the external iliac, half an inch above the aneurism, and in apparently healthy tissue of the arterial wall. The limb was elevated, and hot cans applied.

July 13th.—Pulse 100; temperature 100°. The patient did not sleep well last night on account of pain in the limb. There is slight bluish discoloration of the whole foot. No pulsation can be felt in either of the tibial arteries.

July 14th.—Pulse 100; temperature 100°. The bluish discoloration has extended around both malleoli and the posterior side of the calf of the leg.

July 17th.—Pulse 90 ; temperature 100°. The discoloration has extended over the lower half of the crus. The patient feels weak.

July 20th.–No pus in the dressings. Drainage tube removed. The wound was apparently healed by first intention. The discoloration is slowly advancing toward the knee, but has no defined limits.

July 25th.—This morning it was discovered that some blood had soaked through the dressings, on the removal of which the hole of the drainage opening was found to be filled by a fresh clot. There was no pulsation in the tumor. Ergot and *elixir acidum Halleri* were administered, and a close watch kept over the patient.

July 26th.–Early this morning the hæmorrhage recurred, and Dr. Fenger, having the same assistants as in the former operation, ligated the common iliac in the usual manner, quarter of an inch above the bifurcation.

July 27th.–Pulse 120; temperature 101°. Last night the patient suffered from pain in the left foot, ankle and groin. He has not vomited and slept a little during the night. He has taken milk, beef tea and brandy. No pain in the abdomen. He feels weak, but talks naturally. The people in the house state that at times he has been a little delirious.

July 28th.–Pulse 130, weak; temperature 101.5°. Has had diarrhœa all night. The bluish discoloration now extends four inches above the knee. He has a slight cough, and expectorates mucus streaked with blood.

July 29th.—The patient grew gradually weaker yesterday afternoon and died at 9 p. m.

Autopsy.—Twelve hours after death. In the abdominal aorta were found diffused yellowish white spots of fatty degeneration, in the deeper layers of the intima; but no calcareous deposits were to be seen, showing that the endarteritis deformans was in its first stage. The left common iliac was filled by a recent clot from the bifurcation of the aorta down to the ligature. From the bifurcation of the common iliac a firm clot extended an inch down into the internal iliac. The upper part of the external iliac was filled with a firm but fresh red clot, which was adherent, in some places to the wall. The lower part of the external iliac down to the ligature contained no clot. The catgut ligature had all become absorbed except the knot, which lay loose, on the anterior surface of the vessel. Above this was found an irregular perforation two millimeters in diameter, which leads into the bottom of the wound, through which the secondary hæmorrhage took place, and the cavity of which was filled with bloody pus. Excepting at the place of the rupture, where it was thin, the wall of the artery was healthy. Half an inch below the ligature, the artery suddenly dilated into an ovate diffuse aneurism, three inches long and two broad. Below the aneurism the wall of the femoral artery, showed masses of products of endarteritis deformans, but without calcareous deposits, the diameter of the vessel being about normal. In the profunda femoris, about half an inch below its origin, the vessel was narrowed, and the thickened wall entirely encrusted with calcareous matter. The popliteal artery was filled with fluid blood, and signs of commencing endarteritis were noticeable only in isolated spots. The femoral vein was open above Poupart's ligament, but at this point, commenced an adherent thrombosis which extended down as far as the popliteal vein, caused by compression of the walls of the aneurism.

In this case complete recovery was not to be expected, as the gangrene had already commenced before the first ligation, and the plan of treatment was necessarily limited to: First: The stoppage of pulsation in the aneurism by ligature, and second: amputation, when the progressing gangrene showed a sufficient line of demarcation, to permit us to determine how high up the operation should be made.

During the whole time from the first ligature, until the secondary hæmorrhage occurred no such demarcation of the slowly progressing gangrene took place, but at the same time, no marked constitutional symptoms made a speedy amputation imperative.

It is possible that this was caused by the very careful disinfection and antiseptic dressing of the whole of the gangrenous portion of the limb. But if this be erroneous, the antiseptic dressing had this effect, that at no period, even at the patient's death, were the slightest traces of gangrenous odor perceptible on the removal of the dressings.

The occurrence of the secondary hemorrhage in a part of the eternal iliac where the wall was healthy, confirms the opinion of Rabé, that secondary hemorrhage at the point of ligature is due, not so much to a pathological condition of the intima and media, or to the distance from the point of ligature to the first branch of the artery above it, that is to the length of the clot above the ligature, as to the suppurative destruction of the external coat of the artery, since in this case the ligation wound did not heal by first intention.

The autopsy further shows that the secondary hemorrhage was not due to too early absorption of the catgut ligature, as the perforation in the arterial wall, through which the hemorrhage took place, was situated above the point of ligature.

Case IV.—Cirsoid Aneurism of the head. (Lee, Chicago, 1879.)

Synopsis.—Large cirsoid aneurism of the entire frontal region, of eighteen years standing; rupture of aneurism; ligation of right common carotid with no effect; fifteen days later, ligation of left common carotid; aphasia, and right sided hemiplegia; cessasation of hæmorrhage; three days later, extirpation of the entire tumor; extreme anæmia; transfusion of ten ounces of blood; complete cessation of hæmorrhage; four days later, erysipelas; death five days after the operation.

W. H. D., aged twenty-six; American; shingle sawyer; was admitted to Cook County Hospital July 28th, 1879, placed under the care of Dr. Lee, and gave the following history:

When about eight years of age he sustained a contusion in the region of the anterior fontanelle, by running against the end of a fence rail. The force of the blow prostrated him but he did not lose consciousness. After a few hours, a tumor of about the size of a hazel nut appeared, which was at first tender to the touch and painful, but later on became painless and remained *in statu quo* for eighteen months. From that time it slowly increased in size, so that when he was fourteen years of age it was as large as a walnut. It then became sore and painful, in three weeks ruptured, bled profusely for a time, and then kindly healed. He underwent a short course of treatment by compression with a rubber ring, but derived only temporary benefit therefrom. From this time the tumor increased in size more rapidly. When the patient was twenty years of age, it was as large as a man's hand, and elevated about an inch above its origin, and gradually decreasing toward its margin. A new tumor now began to develop on the forehead, just between the eyebrows. During the succeeding six years the tumor increased in size very slowly, and caused the patient no especial inconvenience. Six weeks previous to his admission to the hospital, a small white spot appeared at the apex of the tumor; on July 2d 1879, this was accidentally punctured by the tooth of a comb and bled very profusely. The hæmorrhage was not *per saltum*, and was controlled by a compress. During each dressing, the hæmorrhage recurred with a like severity. The patient was kept in the recumbent posture for three weeks, a firm compress being applied at the bleeding point. The ulcer still continued to increase in size, notwithstanding this compress, and on July 28th, he applied at the hospital for treatment.

On examination, the scalp and underlying tissues were found to be the site of an elastic, racemose tumor, elevated at its apex, about an inch and a half from the bone, extending longitudinally from the bridge of the nose to the occipito-parietal suture, and laterally from an inch and a half above one ear to the same distance above the other. The tumor presented an irregular ulcer three inches long by two and a half in width, which bled on the slightest provocation. It was found to be supplied by the supraorbital, temporal, and occipital arteries, as the hæmorrhage could be controlled by an elastic band applied just above the ears. The diagnosis was cirsoid aneurism, and the following plan of treatment proposed: First, ligation of the right common carotid. Second, ligation of the left common carotid; extirpation *en masse* of the vascular growth.

August 2nd.—The patient was anæsthetized and a catgut ligature placed around the right common carotid, just above the omohyoid muscle. Antiseptic dressings were used and the wound healed by first intention. The hæmorrhage from the ulcer was at first greatly diminished, but daily increased, as the collateral circulation was established. The patient showed no signs of cerebral disturbance.

August 5th, A. M.—Pulse, 68; temperature, 99.5°. P. M.—Pulse, 72; temperature, 99°. The ulcer was dressed. The hæmorrhage was so severe that Dr. Lee attempted to control it by compression of the left common carotid. He succeeded, but the patient was immediately thrown into a tonic muscular spasm, lost consciousness, and ceased to breathe. On the removal of the compress, and after resorting to artificial respiration, the patient recovered consciousness.

August 6th, A. M.—Pulse, 76; temperature, 99.4°. P. M.—Pulse, 72; temperature, 100°.

August 7th, A. M.—Pulse, 66; temperature, 100°. P. M. — Pulse, 78; temperature, 100.4°. The patient is drowsy, his appetite poor; he complains of severe pain in the tumor; has no paralysis or paresis.

August 10th.—Very much improved. He is now as well as before the operation. Pulse and temperature about normal.

August 17th.—Ligated the left common carotid. During the operation the patient ceased to breathe, and had a tonic convulsion, but normal respiration was restored after about five minutes' artificial respiration. His extremities became very cold, and his pulse feeble. Two hours later the pulse was full, slow and strong. He opens his eyes when he is spoken to, but does not attempt to speak. He cannot swallow; does not attempt to move his right extremities, and lies all the time in a semi-somnolent condition.

August 18th, A. M.—Pulse, 94; temperature, 99.2°. Patient has paresis of right half of body. He can swallow liquid food and is much brighter than last night. P. M.—Pulse, 92; temperature, 100.1°.

August 19th, A. M.—Pulse, 100; temperature, 99°. The aphasia continues; deglutition is not improved; the paresis of the arm and leg is decreasing. During the dressing of the ulcer there was no hæmorrhage, showing that the supply was cut off. P. M.—Pulse, 106; temperature, 100.6°.

August 20th, A. M.—Pulse, 88; temperature, 98.8°. Paresis improved, and primary union of the last operation wound obtained. The patient was anæsthetized, and Dr. Lee, assisted by Dr. Fenger and the house staff of the hospital, now proceeded to the third part of the proposed treatment, the extirpation of the tumor. He made first a crucial incision, dissected off the scalp from the tumor, and removed it from the bone. In many places it included the periosteum. There was not much hæmorrhage, but the shock was severe. The pulse became very rapid and feeble before the completion of the operation. Heat and stimulants were freely used, and the patient rallied. Two hours after the operation the pulse was 138; temperature, 99°, and the patient had not fully recovered consciousness.

August 21st, A. M.—Pulse, 118; temperature, 98.8°. P. M.—Pulse, 156; temperature, 101.8°. The patient is failing fast, is very drowsy. The pulse is very feeble, notwithstanding the use of the most powerful stimulants. Transfusion was performed, and ten ounces of blood injected into the basilic vein. At first, the patient's pulse increased to 190, but slowly fell, as the blood became diffused through the body. In two hours the pulse had fallen to 120, and was full and strong, but soon commenced to increase, and at 11 P. M. was 145.

August 22nd, A. M.—Pulse, 120; temperature, 99.2°. The patient's intellect is brighter, and deglutition less difficult. Stimulants are given in large and frequently repeated doses. P. M.—Pulse, 140; temperature, 101.5°.

August 23rd.—Pulse, A. M., 120; P. M.,

138. The patient vomited without nausea. He takes stimulants. Pulse very feeble.

August 24th, A. M.—Pulse, 112. Patient is feeling fairly well. The wound was dressed ; no suppuration. A small erysipelatous blush and a few bullæ appeared around a small ulcer on the side of the face. This was painted with nitrate of silver. Quinine and alcoholic stimulants were given in large doses. 11 P. M.—Pulse, 140 ; temperature, 103°. 12, midnight.—Pulse, 150 ; temperature, 104°.

August 25th, 1 A. M.—Pulse, 146; temperature, 104.5°. 2 A. M.—Pulse, 150; temperature, 105.5°; respiration, 14. 3 A. M.—Pulse, 165; temperature, 106.5° ; respiration, 20. 4 A.M.—Pulse, 180; temperature, 106.3°; respiration, 20. Patient is in a comatose condition, breathing very labored. The pulse and temperature were taken every hour, but they remained about the same until 11 A. M., when the temperature had fallen one degree, but the pulse had not changed, and the patient continued comatose. 2 P. M.—Pulse, 150° ; temperature, 105.8. 7 P. M. Pulse, 170 ; temperature, 104.5°. Soon after this the patient died. No autopsy was made.

As no autopsy was made in this case, the cause of death is necessarily doubtful. The possible causes of death were three : First : Exhaustion ; Second : Malnutrition of some portion of the left side of the brain, and Third : Septicæmia.

The notable rise in temperature in the last two days before death, is a strong point in favor of septicæmia, and against the other two causes named. It is a well known fact that septicæmia is more likely to occur *cœteris paribus*, in exhausted or anæmic than in robust subjects. But, on the other hand, every surgeon who has a sincere belief in antiseptic surgery will consider the occurrence of septicæmia due rather to his failure to attend to all the details of antisepsis than to any bodily predisposition of the patient.

There can be no doubt as to the efficacy of the operation of extirpation of the vascular growth preceded by ligature of the main trunks of the supplying vessels, as in spite of the fatal result, no secondary hæmorrhage occurred. The total extirpation is the only effective method, when practicable, without immediate danger to the patient's life from hæmorrhage ; as in ten cases reported in the literature, treated by this method, cure was effected in all. (Hemeke, Pitha and Billroth's Handbuch der Allgemeine und speciellen Chirurgie Band III, Abtheilung III, Heft I, part II, page 32.)

All other methods of treatment ; ligation of the vessels, injection of styptic fluids, acupuncture, ligature of the tumor, and the galvano-cautery, have been found, to say the least, unreliable ; ligature of one or both common carotids may be justifiably resorted to as a preparatory measure, only, to avoid fatal hæmorrhage during the operation, in case of very extensive tumors. If possible, the ligature of the second carotid should be avoided, on account of the danger from brain symptoms, due to local anæmia or even malnutrition of important parts of the brain.

From the history it is easily seen that the case was an unusually desperate one, on account of the rupture which precipitated surgical interference to a dangerous extent, necessitating the ligation of the second common carotid, too short a time after the first ligation. But still, the interval of fifteen days is within the limits of similar cases followed by recovery without brain symptoms. We should feel inclined, however, in a similar case to pass a loop around the second common carotid, as a precautionary measure, during the extirpation.

CASE V.—Traumatic Aneurism of Internal Carotid Artery (Lee, Chicago, 1879).

Synopsis.—Bullet wound of left infra-orbital region.—No hæmorrhage.—Subsequent swelling in parotid region.—Fifteen days later, wound healed.—Swelling of hard and soft palate.—Incision of the latter, followed by uncontrolable arterial hæmorrhage, and death in a few minutes.

J. C., aged twenty-eight, Irish, laborer. On the night of September 30th, 1879, during a riot, a crowd of men, of which he was a member, surrounded a railroad car. The patient was standing close to the car, facing toward it and looking upward, when a pistol was fired in his face from the window of the coach, the ball striking him to the right of the nose, a little below the eye. On the following morning Dr. Lee was called to see him. On examination it was found that the bullet had entered at the outer edge of the nasal process of the right superior maxillary bone, immediately below the margin of the orbit. There was much ecchymosis and inflammation, and the margins of the wound were closely coapted. The pulse was 120; temperature 101°. He was suffering slightly from shock; was very restless, and complained of pain in his jaws, which were firmly closed, and any attempt to open them caused him severe pain; deglutition was painful. No exploratory incision was made to ascertain the whereabouts of the ball. Hot fomentations, and anodynes, to allay the pain, were ordered.

Dr. Lee visited the patient daily for a week. At the end of this time the swelling in the face had entirely subsided, but slight tumefaction of the right side of the neck remained, and the pulse and temperature had fallen nearly to the normal point. When he made his daily visit, on the eighth day, he found that the patient had gone down to the city to look after some business matters. During the following week Dr. Lee did not see the patient, but on the fifteenth day after the injury, he called at the Doctor's office, and complained of inability to speak or swallow, and also of a severe pain in the right side of the neck, which, he said, he could not bend. His appearance was that of a man suffering from severe tonsillitis. With considerable difficulty Dr. Lee succeeded in opening the patient's mouth enough to permit of limited inspection. The tonsils and soft palate were so swollen as to preclude inspection of the pharynx. On the hard palate there was a small, firm tumor, about the size of a hickory nut. Thinking this might be the ball, surrounded by inflammatory products, he made an exploratory incision, with a gum lancet, and a few clots of blood escaped. He then attempted to introduce his finger, to explore the cavity, but found it necessary to enlarge the opening. He then removed some more clotted blood. This was immediately followed by a gush of bright arterial blood, accompanied by a peculiar hissing noise. From the volume and force of this current, the immediate inference was that its source of supply was from some large vessel. He attempted to stanch the flow of blood, by compression with a napkin, in which endeavor he was momentarily successful, expecting thereby to gain sufficient time to ligate the common carotid. At this critical moment, Dr. Lee's only assistant, a friend of the patient, who had accompanied him to the office, became panic-stricken and fled; the patient became very much excited and struggled so violently that Dr. Lee was unable to retain the compress in position, the hæmorrhage recurred, and in a few moments the patient died.

Autopsy made by Dr. Fenger.—Rigor mortis. Mouth and nostrils filled with coagulated blood. Half an inch below the margin of the right orbit was found a small, recent, perfectly closed cicatrix, surrounded by normal skin. Right parotid region as well as the region around the angle of the jaw to about an inch below the latter, swollen, but covered with normal skin.

An incision was made along the anterior border of the sterno-cleido-mastoid muscle, and was carried down to the common carotid, which was found normal. In dissecting up from the latter, in order to expose the external and internal carotid, about a teaspoonful of pus was found in the tissues covering the bifurcation, at a point corresponding to the lowest part of the above named swelling. In dissecting upward internal to the stylo-hyoid and stylo-glossus muscles, a cavity was found, which contained some old and some recent clots, after the removal of which the finger could be introduced into an irregular cavity, about an inch and a half in diameter. The external wall of this cavity was formed by the above-named muscles; the posterior wall, by the anterior surface of the first two or three cervical vertebræ and the basilar portion of the occipital bone, and the anterior wall, by the posterior wall of the pharynx. Here the hamular process of the internal pterygoid plate of the sphenoid bone could be felt distinctly. The finger, when passed around this, penetrated into a small cavity between the soft and hard palates. A probe passed through the mouth and the small incision in the mucous membrane covering the posterior part of the hard palate, would enter this last named cavity.

Further dissection of the internal carotid revealed the following: (as the members of the society will see from the specimen herewith exhibited); In the internal carotid, about an inch above the bifurcation, was a circular opening two lines and a half in diameter. Below this opening the vessel was normal; above, it was contracted to about half its normal diameter. A probe introduced into the opening in the artery, passed through a second opening in the posterior internal wall, immediately behind which, in the adventitia of the artery was found the bullet. It was a 32 calibre bullet with rough, irregular external surface, from having passed through bone and was (as will be seen by the specimen) firmly lodged in and adherent to the above-named connective tissue of the adventitia.

The cases in which traumatic aneurism of the internal carotid is caused by an injury, the nature of which does not occasion any suspicion of a wound of this vessel, are exceedingly rare, and also, as a natural consequence, so difficult to diagnosticate, that in all probability they have all terminated in an unexpected death, the diagnosis having been cleared up only by the autopsy.

The places where the tumor or swelling due to a traumatic aneurism of the internal carotid can be seen are the parotid region, the region of the tonsil, and the palate. A swelling in these regions may easily be mistaken for a parotitis, a tonsillitis, or as in the above described case, the seat of the bullet.

Without any further comments we shall now call attention to a parallel case cited by Fisher in "Billroth and Luecke's Deutsche Chirurgie," Lieferung xxxiv, page 94, and published by Fingerhut ("Preussische Medicinische Zeitung," 1864, page 183). A man thirty-three years old was smoking a long pipe. He went down suddenly, and the pipe broke. This was followed by a a slight bleeding from the mouth which soon ceased. The end of the stem of the pipe could not be found. Five days later a swelling of the right parotid region, tonsil and palate commenced. This swelling remained stationary for eight months, after which time it increased in size. One day while hunting a severe hæmorrhage from the mouth occurred, followed six hours later by fatal hæmorrhage.

The autopsy revealed a ruptured opening in the right palate, through which a probe passed into a cavity filled with blood and pus, surrounding the internal carotid, by the side of which the lost pipe stem was found.

It is an interesting and perhaps not altogether accidental coincidence that in both of these cases of traumatic aneurism of the internal carotid, the point through which the fatal hæmorrhage took place should be the same; an anatomical fact that might be taken as a hint for possible diagnosis in future cases.

CASE VI.—Traumatic aneurism of the upper part of the vertebral artery. (Fenger, Chicago, 1881).

SYNOPSIS.—*Revolver bullet wound in upper part of back of neck. Transient arterial hæmorrhage. Four days later, pulsating tumor in left infra-auricular region. Ligation of left common carotid. Cessation of pulsation. Twenty days later, wound healed. Return of pulsation and pain. Eight days later, radical operation for the aneurism with ligation of left vertebral artery, between the occiput and axis. Extreme anæmia. Transfusion of eight ounces of blood. Five weeks* *later, wound healed. Patient out of bed. Perfect recovery.*

George Covey, nineteen years of age, a cook by occupation, was brought to Cook County Hospital, on the night of January 6, 1881. During the evening he had been drinking heavily, and when intoxicated became involved in a quarrel and received a bullet wound in the back of the neck from a calibre 32 revolver. The wound was immediately followed by a very considerable hæmorrhage. The patient stated that a stream six feet high and as large as his little finger spurted out of the wound, and that one of his companions put his finger over the wound to stop the bleeding until a physician could be called in. The bleeding then stopped, but in the course of fifteen minutes so considerable a swelling set in around the left angle of the lower jaw and in the parotid region, that he was not able to separate the jaws more than half an inch. • The physician probed unsuccessfully for the ball, then dressed the wound, and directed that the patient be sent to the hospital.

On examination the patient was found to be robust and well nourished; five feet nine inches tall; one hundred and eighty-three pounds in weight; no hereditary predisposition. He has always enjoyed good health. On the upper part of the posterior side of the neck is the entrance opening of the bullet wound situated about an inch external to and to the left of the posterior median line of the neck, on a line with and two inches and a quarter behind the mastoid process. There is considerable swelling in the left parotid region, extending forward upon the masseter, and around the left eye, where the tissues are infiltrated with blood, as is seen from the bluish color of the covering skin. He can open the mouth only about half an inch. In the left half of the floor of the mouth, at the side of the tongue, is a swelling, bluish red in color from sub-mucous extravasation of blood. There is constant severe pain in the region of the swelling, especially around and behind the left angle of the lower jaw. The wound was carefully probed but the bullet was not found. The wound was then dressed antiseptically, and morphia administered for the alleviation of the pain. The pulse and temperature were normal.

January 11th.—Last evening when the patient was straining at stool he experienced suddenly a sensation as if something had given way (he thought it was the bullet), behind the angle of the jaw. This was immediately followed by excessive pain below the left ear which made him cry out in agony. He went to bed and notwithstanding the administration of considerable quantities of morphine, violent pain continued in the region of the left temporo-maxillary articulation and below the left ear. The pain was accompanied by a sensation of pulsation which moved his lower jaw and teeth, or as he expressed it, "kept the teeth throbbing up and down" synchronously with the pulse.

January 15th.—The pain is increasing so that it keeps him in constant agony. In the left sub-auricular region is a pulsating tumor, the pulsations of which are easily felt through the upper part of the sterno-cleido-mastoid muscle. On the application of the stethoscope here a distinct aneurismal bruit is heard. As there could be no doubt of the presence of a traumatic aneurism at this point, Dr. E. W. Lee, assisted by the house staff of the hospital ligated the left common carotid artery.

January 16th.—Pulse 100; temperature 99°. The patient slept well and feels well.

January 17th.—Pulse 116; temperature 101.8°, doing well.

January 20th,—Pulse 92; temperature 103°. Wound dressed, very little pus on the dressings. Feels well.

January 28th.—The bullet wound is entirely, and the operation wound almost closed. The patient walks around all day; sleeps and eats well. Feels well, with the exception of a slight headache. He states that he feels a slight sensation of pulsation below the left mastoid process, but no pulsation can be detected, and the stethoscope reveals no bruit.

February 1st—This morning the patient went to court, to have his case tried. While this was in progress, he was obliged to stand up for an hour or two, answering questions. He became very tired, the sensation of pulsation became more and more intense, the severe pain recurred, and he felt weak. On his return to the hospital, a slight pulsation could be felt behind and below the left mastoid process, but the stethoscope could detect no bruit.

February 3d.—The patient is confined to his bed, complains of headache and increasing pain in the region of the pulsation. Potassium iodide and ergot are administered.

February 7th.—The pulsations and pain are increasing. He can sleep only by the aid of morphine. With the stethoscope no distinct aneurismal bruit is heard, but the propagated heart sounds are heard as distinctly as if the stethoscope had been applied over the common carotid.

February 9th.—As there was no doubt that a traumatic aneurism had recurred, and by bursting into one of the adjoining cavities was endangering the life of the patient. Dr. Fenger resolved to make the radical operation as a last resort to save the life of the patient. The patient was anæsthetized with ether, and Dr. Fenger proceeded to operate assisted by Drs. E. W. Lee, J. B. Murphy, and the internes of the hospital, Dr. W. P. Verity, House Surgeon, and Drs. Bradley, Meacher, Macarthur and Kendall, and in the presence of Mrs. Dr. Sprague of Pennsylvania, Dr. Steele of Oshkosh, Wisconsin, Mr. Stanton and others.

As the ligation of the left common carotid had caused stoppage of the pulsations. Dr. Fenger resolved to commence the operation by securing the external carotid. An incision three inches in length was made, along the entire upper half of the sterno-cleido-mastoid, the tissues carefully separated, a careful watch kept for the pulsating vessels around the border of the pulsating tumor, with a view to securing them by ligature either isolated or en masse, before opening the sac of the aneurism. When on pressure in various places pulsation was apparently felt, and the aneurismal pulsation seemed to cease, an aneurism needle armed with heavy aseptic silk, was passed successively around the area of the tissue involved and ligature en masse tied, but always in vain. After four or five such ligatures had been passed, the pulsation in the aneurism remained the same as before. Dr. Fenger now determined to lay open the sac, and catch up the supplying artery *in loco.* To this end a transverse incision two and a half inches in length was made, extending from the upper end of the former incision backward from the mastoid process, through the skin and insertion of the sterno-cleido-mastoid, in order to secure the posterior occipital artery, which might possibly be the vessel supplying the aneurism. After the sterno-cleido mastoid had been removed, the pulsation could be felt very distinctly. After cutting through the thin layer of the deep muscles of the neck, the aneurismal cavity was opened, which was partially filled with dark clots of blood. After the removal of these clots, a large quantity of arterial blood spurted out. The hæmorrhage could be controlled only by pressure on the bottom of the cavity, at its deepest part. On the introduction of a finger at this point, the inferior portion of the *squama ossis occipitis* denuded to the extent of about half a square inch, could be felt. At the internal wall formed by the atlas and axis, some irregular splinters of bone could be felt. While one of the assistants kept a finger pressed against the bottom of the cavity, to control the hæmorrhage, the tissues were cut through downward along the transverse processes of three or four cervical vertebræ, and the whole of the sac laid open, which necessitated the removal of the upper fourth of the sterno-cleido-mastoid muscle. On the suggestion of Dr. Lee, the right common carotid was cut down upon, an aneurism needle passed around it, and the vessel compressed to see if it would have any effect upon the hæmorrhage, but it had not. As soon as the finger was removed, the blood gushed out as before, and the only effect of the pressure was to cause cessation of the patient's breathing. Artificial respiration had to be carried on for about five minutes, during which time hypodermic injections of whiskey were made, whereupon respiration again commenced.

Search was now made for the vertebral artery, which finally was taken up at its curvature around the atlas, and secured by a ligature. The bleeding then stopped. The vertebral artery was unusual in size, being nearly as large as the internal carotid.

During the ligation of the vessel, respiration stopped again, no pulse could be felt, and the patient seemed dead. Artificial respiration, hypodermic injections of whiskey, and rubbing of the cold extremities restored the respiration and the almost extinct life. The wound was speedily united, drainage tubes inserted, Lister dressing applied, and the patient brought to bed. He was cold and almost pulseless. The radial pulse was 170, and scarcely perceptible. The crural artery was pulsating with little more vigor than the normal radial. Dr. Fenger thereupon immediately proceeded to transfuse slowly eight ounces of defibrinated blood. This was accomplished by means of a canula with rubber tube and common syringe. At the end of the transfusion the radial pulse gained remarkably in strength, and decreased to 150. Hot bottles and warm blankets were now applied, and another hypodermic injection of whiskey given.

February 10th, A. M.—Pulse, 140; temperature, 99.3°. Has rallied from the shock so that he can speak clearly. He says that he feels weak, but has no pain, and is warm. As he is not able to move his head, wine and a considerable quantity of milk have been administered through a tube.

February 15th.—Pulse, 108; temperature, 98.4°. The patient is getting a little stronger. He is still unable to move his head, but rests well nights, takes considerable food, and has no pain nor sensation of pulsation. The wound was dressed. Very little discharge was found on the dressings.

February 17th.—Drainage tubes removed; very little discharge. The patient suffers pain only when his head is moved.

March 15th.—The wounds are healed. The patient is able to sit up and to walk around the room. He can now move his head freely to the right side, but cannot move the chin to the left beyond the median line. He can open his mouth, but is unable to masticate on the left side. There is no pain, swelling or pulsation in the region of the former aneurism, but there is a little hard tumor and slight tenderness on pressure in the region a little anterior to the temporo-maxillary articulation.

March 25th.—Is up and around the whole day long. No pain or pulsation. Some stiffness of the neck when he attempts to turn his head to the left.

April 7th.—Left hospital.

June 20th.—He feels perfectly well with the exception of slight stiffness of the neck.

August 8th.—He came to Dr. Fenger's office and stated that he had been working as a cook on a lake steamer. The stiffness of the neck had disappeared, and he could move his head freely in all directions. There was some flattening in the region of the upper part of the sterno-cleido-mastoid muscle, but no pain on pressure. Movements of the jaw were free and painless.

This case is of more than ordinary interest, because it is the first case on record in which ligation of the vertebral artery has been performed successfully between the occiput and axis; and further, because it is the fifth case of thirty-four on record, in which a wound including traumatic aneurism of the vertebral artery has terminated in recovery.

The diagnosis of a vertebral aneurism is, in the majority of cases, obscure, that is, it is often very difficult to decide whether the pulsating swelling in the lateral region of the neck is due to an injury of the vertebral artery, on the one hand, or the common carotid or one of its branches, on the other. This well known fact is well illustrated by the symptoms in our case. The swelling set in simultaneously in the parotid region and posterior region of the mouth; in the case of aneurism of the internal carotid, reported above, the swelling oceurred in exactly the same place, which is characteristic for aneurism of the latter artery. It was, therefore, natural for Dr. Lee to make the ligation of the common carotid. This case was the more deceiving as the ligation was followed by relief of the pain, decrease of the swelling, and cessation of the bruit. The continuance of the subjective sensation of pulsation felt by the patient, would naturally lead rather to the conclusion that this distant or Hunterian ligature had been unsuccessful on account of the establishment of collateral circulation in some of the branches of the carotid system, than to the conclusion that the location of the aneurism was outside of this, that is, in the vertebral artery.

Even after the second return of pulsation and bruit, when Dr. Fenger resolved upon the radical operation, he expected rather to have a branch from the carotid system to deal with than the vertebral artery.

The only means of determining whether an aneurism in this region is supplied by the carotid system or the vertebral artery is, as is well known, alternate, isolated compression of the vertebral and common carotid arteries. The vertebral artery may be compressed against the cervical vertebræ, below the carotid tubercle, but in this place pressure is likely to occlude both the common carotid and the vertebral arteries. Above the carotid tubercle, that is, above the place where the vertebral artery enters the canal, it is possible, by pressure, to occlude the common carotid alone. In the majority of cases this will be conclusive, but it is not always reliable, as the vertebral artery may enter the canal at the fifth or fourth instead of the sixth cervical vertebra. Consequently it is not only always difficult, but it may, in certain cases, be impossible to exactly locate the vessel supplying the aneurism.

If, however, this difficulty has been overcome, that is, if the vertebral artery has been found to be the vessel supplying the aneurism; what is to be done?

A priori, we have the choice of three methods of procedure. First: external compression; Second: ligation of the vertebral artery below the carotid tubercle; Third: the radical operation, that is the opening of the sac, removal of the clots and stoppage of the hæmorrhage by ligature or compression. It is almost needless to state that the two first methods are unreliable; but still direct pressure succeeded in stopping the pulsation, with recovery of the patient, in Mobe's case, reported by Kocher (Langenbeck's Archiv fur klinische Chirurgie Band XII., Heft III.; Virchow-Hirsch Jahresbericht, 1871, Band II.; Abtheilung II., page 331). The majority of patients cannot endure a pressure sufficient to cure the aneurism, on account of the excessive pain; but this procedure should, of course, be tried before resorting to more radical measures; as cases may be found in which either the wound in the artery is so small, or the local conditions otherwise so favorable that absolute immobility of the parts may cure the aneurism. This has been seen in a case cited by Holmes (System of Surgery, vol. II., page 415) in which spontaneous cure, "aided only by applications of cold" took place.

The ligation of the central end of the vertebral artery below the carotid tubercle has not been resorted to in any of the successful cases on record, although the artery has been successfully tied at this place for other purposes.

The radical operation has, finally, to be resorted to when pressure fails to cure the aneurism. In the course of the artery through the canal in the transverse processes of the cervical vertebræ, it has hitherto been and will probably always be impossible to apply a ligature to the artery, and consequently the only means by which the hæmorrhage in the exposed cavity of the traumatic aneurism can be checked, is by plugging the cavity with tampons, so as to occlude the opening in the artery. This treatment was successful in Kocher's case (*op. cit.*) in which pulsation and hæmorrhage occurred after a punctured wound in the region of the fifth and sixth cervical vertebræ. When he had laid open the cavity he could see both ends of the divided vertebral artery, but was unable to seize and ligate them. The cavity was plugged with tampons soaked in perchloride of iron, and, notwithstanding an attack of erysipelas during the after-treatment, the patient recovered.

The same method was resorted to by Dr. J. Mason Warren, (Surgical Observations with Cases and Operations, by J. Mason Warren, M. D., Boston, Mass. 1867) to the courtesy of whose son, Dr. J. Collins Warren of Boston, Mass., we are indebted for the report of the case. A boy eleven years of age received a gunshot wound of the vertebral artery, followed by violent hæmorrhage. On the following morning, Dr. Warren resected a portion of the transverse process of the second or third cervical vertebra. The hæmorrhage now recurred. Systematic plugging with bits of sponge was now resorted to, and was followed by the recovery of the patient.

In the upper part of the artery, between the occiput and axis, the ligation can be done, as was shown in our case, and is, it is needless to state, preferable, as it is as safe a method as plugging is unsafe. That the ligation at this point is difficult will be seen by the remark of Vischer (Billroth and Lueck's Deutsche Chirurgie, Lieferung xxxiv. Krankheiten des Halses, page 107) that "the part of the artery between the occiput and the transverse processes of the first and second cervical vertebræ, is not accessible for direct ligation, even when a part of the sterno-cleido-mastoid muscle has been removed."

As it will be seen from the history of the case, our patient came very near dying on the table, and lost so much blood that immediate transfusion was imperative. It is, however, possible that the ligation at this point, in a similar case might be facilitated by, as a preliminary step to the operation, cutting down upon and securing the central end of the vertebral artery below the carotid tubercle, by a loop, to be used for compression during the operation. We shall not hesitate to recommend and employ this procedure in similar cases in the future.

MY BI-FRACTURED PATELLA—PARTIAL BONY UNION AFTER EIGHT YEARS. BY EPHRAIM CUTTER, M. D., New York.*

Prelude.—In September, 1873, the writer was thrown from a carriage by a runaway horse, and alighted on his legs flexed upon thighs, soles of feet upwards. Of course the blow came on both patellæ, which in the writer's opinion prepared the left for fracture by muscular contraction a few weeks later, on the principle that blows disintegrate bones or stones, even though it takes several blows before complete separation is effected, and though it is the last blow that breaks, the first blow must weaken the structure somewhat. So I think the overturn and fall on the ground was a predisposing cause to the fracturing of my left patella.

September 24th, 1873, while running down the stone steps of the outside main entrance of the Massachusetts Institute of Technology, Boston, the accident occurred which forms the subject of this paper—in this wise. When one runs, the body is for a brief but appreciable time suspended in the air, both feet off the ground, one limb in the act of extension to receive the weight of the body and the other limb being flexed ready to be extended forward to take the place of the other limb. See the instantaneous photography of dogs. It so happened that the extended foot, owing to the unusual length of the tread of the stone steps, or other causes, did not clear the step and alight on the tread of next lower step; but while the leg was partly extended, the heel of the boot caught the angle of the step and held there. The force of extension

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combined with the weight of the body was suddenly checked, and the combined forces flexed the thigh so that the patella, drawn on so powerfully over a corner made by thigh and leg, was torn apart with audible noise, quick as a flash. The buttocks then being unsupported fell, and I sat down. Every one who has conversed with me about the matter seems to be of the idea that the fracture was caused *by* the fall, whereas the fracture *caused* the fall. The personal feeling was that of sharp pain as of dislocation, which found some relief in cries for assistance. Then the skies seemed to rise, and the steps to sink into the ground, and finding myself unable to rise I laid prostrate to avoid fainting away from shock. Dr. W. E. Boardman, of Boston, happening to pass, came and diagnosticated the case, to my surprise, a complete transverse fracture of the patella into two equal parts.

Conveyance home ten miles in a hack, after a comfortable circular bandaging of the limb on a straight splint wet with water; great swelling and pain; removal of dressing; pillow splint; knee twice the size of the other, red, hot, hurning. Opiates and chloral of no avail. High fever. Indifference to life. Ice burnt like fire. Relief afforded by bathing with strong tincture of Veratrum Viride, diluted with alcohol. A nurse sat up all night bathing the knee with this tincture as fast as it became hot. This probably saved my life. The mechanical treatment was a tin splint moulded to back of whole lower limb, padded with glycerine sponge. The fragments were kept together by a piece of adhesive plaster on front of thigh, held in place by bandages and attached to a row of india-rubber one-quarter inch tubing, five inches long, the other ends of which were attached to the foot of splint. A small pad of glycerined sponge placed under the tube just above the upper fragment, kept it pressed down close to its fellow, with the result of an adhesion to the sheath so that when extension was made it was at the expense of the new ligament, until in August, 1874, I fell down stairs and released the upper fragment, and the stretching of the ligament ceased in a measure.

Second Fracture.—Jan. 31,1880. Heavy boots with *steel nails* in the heels were the cause. Had *iron* nails, as Dr. John A. Lawson, of Boston, suggested, been used, being soft and wearing off with the leather they grip the pavement and would have held, while steel nails slipped like grease. Going down hill on Somerset st., Boston, a quite steep declivity for a street, there was a slight elevation of the sidewalk, so that my left heel slipped forwards suddenly. Had I allowed myself to fall backwards in place of trying to recover my footing, a second transverse fracture would not have occurred from the sudden extension of the leg, combined with the weight of body falling backwards. There was the same kind of a fall after the fracture as in the first accident. I found myself disabled. A bystander assisted me to rise, and walking backwards with the left foot scraping the ground, the limb was kept straight, and I locomoted home some fifty feet distant. I went upstairs backward, and went into the parlor and sat down, saying nothing. But my wife's keen eye detected something wrong, and she incisively and summarily soon found out the situation. I suppose my countenance was so changed by the shock, showing the power of the involuntary over the voluntary nervous system, for I did not intend to tell her until I got into my own room. There was much less pain and swelling than in the first fracture.

Drs. H. O. Marcy, A. L. Norris, S. W. Abbott, of Mass., Dr. Black of New York kindly did up the limb in a plaster bandage from ankle to groin. It was kept in this forty days. During the latter part of the time it was cut lengthwise and removed nights. I was not confined to bed and made a good recovery.

Nature of last Fracture.—During the course of six months after the fracture was supposed to be healed, a distinct furrow formed transversely through the middle of the lower fragment, and enlarged to half an inch. This was a surprise in diagnosis, for not only did the skillful surgeons who examined the case think that the new ligament of the fracture of 1873 had been ruptured, but I myself agreed with them. The fragments of the second fracture were so closely approximated that the fracture was not detected until months after the injury! The lesson this taught me will be alluded to farther on. I can speak very highly of the plaster bandage, as it allowed me to get about. The inconveniences of it were the retention of sweat so that the limb became sodden, coldness of limb from the evaporation of sweat oozing out through the pores of the plaster from the skin and the weight;—but its value as a protector in falling outweighs all other considerations, as I once fell down stairs with the cast on and received no hurt. I rode in cars, carriages, and performed operations with this cast on, which otherwise I could not have done. I wish I could have used it in the first fracture, but there was too much inflammation.

Some points of my personal life in connection with these fractures, will now be submitted in the hope that some one may profit by my experiences.

Though these may not all seem to be of value still they are part and parcel of my history, and claim or have claimed my attention whether I will or not.

1st. Feature. "*Coldness of left thigh and buttock.*"—For several years after the first fracture my thigh and buttock were cold to the touch as a corpse; not that the difference was so great by the thermometer (70°) as to objective and subjective touch, but it was a *great trouble* not relieved wholly at the present time. Only last summer I walked beyond my strength on a very hot day. I suffered no pain, but felt unpleasantly in the epigastrium. On touch, the left thigh and buttocks presented a clammy icy coldness just like a corpse, and the leg below hot enough to correspond with the weather and my exertions. Drs. Salisbury and G. M. Beard have given me the best explanation: the extensors of the thigh being in a state of complete shortening from two inches of patella new ligaments, the local nerve centers are paralyzed from the long continued irritation and the atrophy of the thigh; hence a want of local capillary circulation.

The fact that the left leg below the knee retains its local heat though removed further from the center of circulation, shows the local character of the paralysis. I see no relief until the flexors of the thigh are elongated to normal length by taking up the slack at the knee pan. I never have seen this feature mentioned in connection with this accident, but on query I find it appears to be a common experience in this fracture. I have found placing my left hand on the thigh and my other hand on my forehead to equalize the heat in my body better than most any other proceeding. I suppose some would call this an equalization of animal magnetism.

Removing the Pain in Knee-Joint by Rubbing the Well One.—Unfortunately opium and its alkaloids, chloral and other nerve sedatives, with the exception of veratrum viride, act unkindly on me. They would not relieve my pain, but rubbing the well knee would. I have no explanation, and only record this as a fact.

Partial Bony Union After Eight Years.—If any one will carefully examine the plaster cast of my knee taken by my friend and dentist, Dr. G. B. Harriman, of Boston, in 1880, and compare it with the cast taken in 1882, there will be seen a difference. On the 1880 cast to the right it is smooth and even, while the 1882 cast presents an elevation to the right, running diagonally downwards and inwards.

It appears to be a continuation of the middle fragment. It was not present in 1880. It was present in 1882, and the casts furnish the best evidence I can give of the *fact* of this new occurrence. I did not discover it myself till attending the Centennial meeting of the Massachusetts Medical Society in 1881. Some medical gentlemen asked me about my patella, and in showing it to them I found the new bone. Profs.

S. D. Gross, Hamilton, and many others have examined and pronounced the new formation bone. One doubter said he should not believe it until the bony tissue was demonstrated under the microscope. To my mind the evidence is complete without this; and as it is impossible in this world to have perfect unanimity on all subjects, I shall not distress myself if every one does not view my case as the eminent gentlemen and authorities alluded to above. I should regard it as a useless distress to cut into my knee-joint for the sake of a uniformity of opinion. There is no appreciable difference in the density of feel of the new bone from the rest of the patella. It tilts the same; it grows, and, I am thankful to add, gives a degree of confidence in its strength, so I now can feel safe to go about without my cane.

Prof. Hamilton, the author of a work on fractured patella, says there is only one such case on record. How do you account for it? Simply by dieting on the Salisbury plans for health—two thirds animal to one third vegetable by bulk—two mouthsful of animal food to one mouthful of vegetable; and besides, the avoidance of common flour, starch and sugar in excess. I know some call me an enthusiast. Very well, I think when history records but one case of partial bony union of the patella after so many years, there is room for some enthusiasm.

Still I respect those who differ, and give as the reason of my belief the following:

1. Provided animals get natural food in proper times, amounts and quantities, other things being equal, their system will "run" normally and the nutrition will be normal.

2. In such cases Dr. Lyonell Playfair says the whole body will be renewed once in seven (7) months. This from careful study I believe to be within the truth.

3. Again, in such cases nature heals and repairs any lesion, provided there is vital force enough. If not the repair is incompleted or arrested .

Example.—At one time during my hundred and ten days of confinement in the first fracture, I was so comfortable that I thought it was too bad to lose so much time in bed, forgetting that it was work enough to keep still and repair the fracture. So I started to collect together the literature of fractures of the patella in my library. I began with old Heister's Surgery of 1758, and worked all day with zest and enjoyment. Just after supper I was brought up sharply with a severe pain in the solar plexus of nerves at the epigastrium. The pain took all my attention. An emetic brought up my supper and dinner, both undigested and perfectly sweet. Then I knew what the matter was, and found my whole left lower limb cold as ice and dead like a corpse. I had expended too much of my nerve force in my literary work, and thus I had not enough to "run" my digestion and fractured patella. My colic was nothing but nature's flags of warning to stop this wasteful exhaustion. And when I did stop long enough the trouble was arrested by the saving of my nerve forces. Once in my earlier days of practice I had a woman whose fractured humerus would not unite until I stopped her washing clothes, and relieved her in her care of a large family of children.

I think the surgeons here must have had many examples of this in their experience

Now, in my case, besides my food, it may be that my restrictions in walking (my office is now in my house) may have given nature a chance to deposit bone in my eight years' old ligament. My literary and scientific labors have increased since January, 1881. I have had no rest in them.

The following is the list I live on:

ANIMAL FOOD—TWO-THIRDS BY BULK.

Milk, butter, *eggs*, *cream*, cheese, *beef steak*, *sirloin steak*, porter house steak, *roast beef*, corned beef, *beef tongue*, *tripe*, *ox tail*, calves' feet and heads, pork, fresh and salt, *pig's feet* and heads, sausages, *chicken*, geese, pigeon, *squab*, fish of all kinds, aquatic or marine, *salmon*, *eels*, haddock, scup, perch, halibut, sword fish, cusk, *clams*, *clam water*, shell fish, *oysters*, scollops, shrimps

VEGETABLE FOOD—ONE-THIRD BY BULK.

Wheat, whole, cracked, crushed, and baked like oatmeal, Arlington wheat meal, *Franklin mills entire flour*, *cold blast*, Carr's Graham flour, oats, rye, maize, buckwheat, peas, cabbage, tomatoes, celery, onions, spinach, lettuce, dandelion, parsley, radish, cranberry, turnip, squash, carrot, pickles, fruits, apples, Irish moss.

The reason why flour is excluded, is because ordinary flour is impoverished to the extent of 75% of the normal food man ought to get when he eats wheat. I have eaten the entire wheat flour, Franklin Mills, Lockport, N. Y., which contains a larger amount of the normal elements of the wheat than any flour I know of.

See Dr. Gaillard's MEDICAL WEEELY, 1882, for full exposition of this subject. I feel confident that the partial bony union of the patella is growing more complete and stronger. Should it continue a sequel will be given.

NOTE.—The patient is not expected to eat everything on the list in order, but to make selections according to will, but the articles in italics are preferable.

Cramp in left leg.—This usually comes after walking too much, and shows a reaction of the nervous system against the overwork.

Elevation of the left great toe.—Actually a hole was once pierced through the upper of my shoe, now double leathered at the spot and I find a spasm of the extensors of the toe.

Ordinarily the knee joint takes care of itself, but mine is as much care as a baby. Without regard to will the joint will accomodate itself to any irregularities, in smoothness, slipperiness, roughness, depressions, and plane of surfaces walked, but unless I watch I am liable to slip, fall, and break the other knee pan, or the same one.

The Joint also will crumple or suddenly flex and thus render accident possible.

For this reason I have to look out for banana, orange, lemon, and other fruit skins,or pulp on pavements--for smooth and slippery surfaces—for irregularities of one half inch and over, for inclined planes, on side walks and streets, hence New York is preferable to Boston.

I can tell at once the best substance for pavement and give preference to smooth gravel walks and streets. I now admire the wonderful physical properties of such walks as give a sure hold to the feet, and yet easily and instantly release the hold at the exact time it should be released.

I fear groping in dark stairways and halls, walking in wet weather, going beside a horse in a stall, climbing, locomotion, hustling crowds.

Mechanical Disabilities.—Can't run; two feet on one step ascending or descending stairs, for a good deal of the time, generally when tired out; can't kick; can't leap; after fracture a backward locomotion; squatting and scrambling gait when obliged to run quickly,—leg thrown forward by its own weight rather than by extensor muscles, movements in walking much less than with the well limb. I know what David means in Psalms 18; 29.

Surgical Features.—Exostosis at upper part of middle fragment; ecchymosis completely round the whole limb at knee for six months. Ligament of seven years standing, stronger than bone. Prof. Hamilton's remark. Adhesion of upper fragment to its sheath and flexion of knee made by stretching the new ligament; the adhesion should have been discovered and broken up under ether. Malgaigne's hooks were not advised as the joint was red as a beet and double its natural size. Union by silver sutures was not advised by Prof. L. A. Sayre.

The aspiration of the joint so successful in Dr. H. O. Marcy's hands was advised after it was too late, still it might have been unreliable as the two lower fragments were so close together that Dr. M. himself did not detect the separation when his attion was called to it particularly and yet as seen on the cast of 1882, the ligamentous union is about 1-2 inch in length. Indeed the plaster cast did keep the fragments together as only after several months did the present lengthening occur.

I think the nature of the accident has much to do with a good union. Many years ago the late Dr. B. Cutter of Woburn, Mass., got a good union, bony so far as can be ascertained without dissection, of a compound comminuted fracture of the patella caused by the kick of a horse backward. This case is living with a perfect recovery and rather laughed at me for having so poor a union. I have seen other cases of direct fractures of the patella and they have done well while those like mine have not done so well.

There is a difference between direct and indirect fracture like that between a cutting and a tearing severance, this is markedly shown in the case of severance of small arteries. Now I think there must be some difference in the physical conditions of the fractures in question. Torn, the vessels must be obliterated somewhat and if so this explains the difference in results, so if one was to select the mode of fracture I would advise the direct method.

Clinical Laryngology.—To show what can be done under stress, while confined with this fracture to bed, I surgically removed two post pharyngeal tumors from behind the soft palate. Also made examinations with the laryngoscope and topical applications.

It was a mistake of mine to bring down the upper fragment by means of adhesive plaster and have the extension counteracted in the center of the foot. The long axis of the thigh prolonged comes inside of the internal malleolus. I found this out too late. When released from confinement the outer fragments were close together at the outer edge but one half inch apart at the inner edge.

Conclusions.—The most important things that press on my mind after these experiences are:—

1. The plaster splint.
2. Let the patient get about reasonably.
3. Aspirate the joint if distended.
4. Study the extension and if it is at the expense of the new ligament etherize and remove the adhesion.
5. Don't be in a hurry to take off the splint.
6. Don't be in a hurry to bend the limb. The Cabot* rule of six months is good.
7. Eat animal food 2-3 by bulk, and vegetable food 1-3 by bulk; eat wheat, rye, barley, oats and maize in their integrity and avoid common flour.

If after eight years I am having a partial bony union in the ligament of my patella, on these plans may it not he hoped that an earlier and more complete bony union may be obtained by an earlier adoption of the plans of Salisbury?

OVARIAN TUMORS. By L. B. ANDERSON, M. D., Hewletts, Va.

Five years ago I was consulted by a young lady concerning certain tumors which had appeared some time previously in her lower abdominal regions. An examination disclosed the existence of a bifurcated tumor about the size of the right ovary; one prong being about double the size of the other, and conjointly some five inches in diameter; and in the left ovary another tumor about three inches in diameter. These tumors were very hard, unimpressible, nodular and slightly movable. They had first attracted attention a year previously, when they were quite small; and though they had grown quite considerably within a year, they caused no serious inconvenience, nor any acute pain. The menstrual functions were naturally performed.

A few weeks after my visit she was married. During the fifth month of pregnancy she suffered constant pain and inconvenience in the hypogastric region, which culminated in parturient pains and miscarriage. Seven months from this time she entered the fifth month of her second pregnancy, and had another miscarriage. I was with her at the time, and discovered a marked increase in the dimensions of the tumors since my examination, a little over a year previously.

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* Dr. Samuel Cabot, of Boston.

About twelve months after this she gave birth to a large, healthy boy. Two years later she bore a very fine girl. A few days ago I was called to see her for the relief of a dysentery. Upon an examination of the abdomen I could discover no trace of the tumors whatever. The lady knew they had disappeared, but when or how she knew not—probably during her third pregnancy. The *modus operandi* may be rationally conjectured, but as it would be, after all, but a conjecture, I propose to omit its discussion.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

SOME PRACTICAL POINTS IN THE TREATMENT OF HÆMOPTYSIS. By JAMES M. WILLIAMSON, M. D., Edin., Ventnor.

In bringing forward, in a very brief manner, some practical points in relation to this question, I will, for the convenience of the first part of my object, divide cases of hæmoptysis into three kinds: first, the slight; second, the copious; and third, what may be termed the explosive.

In the *slight* form, the basis of the sputum is composed of mucus which is stained more or less deeply with blood, the bleeding vessel being of small size. The most successful remedy for this form is ergot.

In the second or *copious* variety, the expectoration consists of pure blood, the quantity of which may vary up to a very large amount; and the bleeding ceases gradually until the attack is over. Here again the most successful remedy is ergot, and indeed it is in this kind of hæmoptysis that ergot is especially efficacious. In order to prove efficient in hæmoptysis, however, ergot must be given boldly. One teaspoonful of the liquid extract is a suitable dose, and it may be ordered every half-hour, hour, or two hours, according to the urgency of the case. If it is doing good, it is a mistake to leave it off before the sputa are bloodless, although the intervals between the doses will be lengthened as the hemorrhage abates. In a few of these cases, ergot will fail; not in many, but now and then. If seven or eight doses be ineffectual, it is best to abandon it. The next remedy worthy of confidence is gallic acid, which it is necessary to give freely, in doses of fifteen to twenty grains, at intervals the same as in the case of ergot. Should there be tedious delay in the final clearing up of small traces of blood from the sputa, an acid mixture with quinine is usually effectual; or, if very obstinate, ipecacuanha, in twenty-minim doses of the wine pushed to slight nausea, will generally remove them.

In the third or *explosive* variety of hæmoptysis, the attacks are profuse, sudden in their onset, all at once ceasing, often for many hours, then abruptly breaking out again. There is no gradual subsidence. The lesion is probably a rupture of some aneurismal sac in the wall of a cavity. Now it is in these cases that ergot is hardly ever of much use. In my experience, the best remedy is turpentine internally, with cold applications over the chest. Three-half-drachm doses of oil of turpentine may be given, half an hour apart; or, if care be taken to follow it with castor oil even more than three. When the turpentine is left off, it is well to follow up closely with a mixture of gallic and aromatic sulphuric acids, sulphate of magnesia, and quinine. It is particularly in this type of case that digitalis is often useful for calming vascular excitement. As the patient often makes blood very rapidly, the free use of aperients ought to be enjoined.

Nothing could be easier than to quote a long string of remedies for hæmoptysis, but my present object is to leave prominently on the mind one or two that are to be relied upon, and to indicate their spheres of usefulness. Nor is it necessary to dwell on certain instructions which apply to all forms of blood-spitting. Constipation must not go unrelieved, and is best treated by salines. A quick pulse must be steadied by digitalis, of which perhaps the most handy form is digitaline granule of Homolle and Quevenne. Cough is to be soothed; the simpler the mode of accomplishing this the better, but it must be done; and nothing answers better for this than a chloroform pad laid over the sternum.

Speaking in a general way, and not alluding to hæmoptysis of cardiac origin, I hold that we should keep before our minds the advisability of stopping all blood-spitting in phthisis without delay. To this rule, perhaps, there are two exceptions. The first is trivial. It is that dirty-red, slimy bad smelling, never abundant expectoration which hysterical women with phthisis often exhibit at the bottoms of their spittoons; this may be left to itself. The other exception is a serious one; it comprises those forms of hæmoptysis, usually copious and angry, occurring in advanced and very chronic cases where there is considerable amount of fibroid induration. In such patients, notable dyspnœa on exertion has for a long time past been a prominent symptom, and respiration has been maintained with a very small extent of lung substance. These cases are open to a special danger—that of fatal embolism in the right chambers of the heart or the pulmonary artery. Not uncommonly, the course followed is for the bleeding gradually to abate in quantity, remaining, nevertheless, of the same angry red; then urgent dyspnœa suddenly sets in, and death takes place within forty-eight hours. These are cases calling for extremely careful treatment. Can it be right, where only a small surface is available for respiratory function, to contract those few vessels with ergot? Or can it be good practice to pass styptic medicines into a patient's circulation when the cachectic state, his low vitality, and perhaps some febrile movement, render him especially liable to the formation of thrombi. It is wisest to limit ourselves to external applications, chloroform-pads, dry cupping, sinapisms at a distance or other derivative treatment, with appropriate general management.

Perhaps I may be allowed to conclude with two cautions, common place they may seem, but both of them the outcome of bedside experience. One is, to have some responsible person in attendance night and day, on all cases of severe bleeding, till the attack has completely passed away. Death by hæmoptysis is generally sudden, and it is very appalling to discover too late the consequences of omitting this precaution. The other is, to decline positively to examine a patient's chest while there is any hæmoptysis. Irrespectively of the danger of the process, an opinion arrived by auscultating a chest during or immediately after a bleeding is not a reliable one.

ON THE IDENTITY OF THE ACTION OF IODINE AND IODIDE OF POTASSIUM, by M. CHARTERIS, M. D., Professor of Therapeutics in Glasgow University, and Physician to the Glasgow Royal Infirmary.

Theoretical considerations lead many observers to the conclusion that the action of iodine and iodide of potassium on the system is similar. It is presumed that iodine taken internally is transformed into an iodic albuminate, so circulates in the blood and is then converted into an alkaline salt and excreted from the system. Experimentally it has been proved that iodine can be liberated from the iodide of potassium when that compound is exposed in an aqueous solution to carbonic acid and protoplasm. The same conditions appear to exist in the tissues—i. e., the lymph glands dan muscles,—and it is possible that whatever decomposition may occur in the stomach, the final change, when the iodide is taken internally, and the liberation of the iodine take place there. Other theorists imagine that iodine and iodide of potassium have a totally different action; and that the efficacy of the salt depends in a measure, if not entirely, on alliance with the alkaline base.

The following case bears pertinently on the point at issue—viz., can the phenomena of iodism be observed in the same individual by the administration of both substances?

A woman aged thirty-five, married, and the mother of six children, was admitted four weeks ago into the Glasgow Royal Infirmary suffering from chronic rheumatism. She had been a patient in the hospital ten years previously with an acute attack of rheumatic fever, and as the result of this there was a well-marked double murmur at the apex of the heart. In appearance the patient was dark-haired, dark-eyed, and her skin was of the brunette character. Her temperature was normal. The affection of the heart gave her no uneasiness, and she was accordingly ordered the following mixture: two drachms of iodide of potassium, and six ounces of the infusion of quassia, a tablespoonful to be taken thrice daily; each dose therefore contained ten grains. Half an hour after taking the first dose she complained of a slight itching of the nose and tenderness of the nasal and conjunctival mucous membrane. This was increased by the second dose, and in an hour after taking the third, she stated she had small shot-like elevations, appearing first in the inside of the knees, then spreading over the body. The eruption was most marked in the legs and elbows. She also observed that the feeling was as if she had had "the skin laid bare, and that she was then bathed in salt and water." The soreness was more marked than the itchiness. On examination it was evident her statement was true, for small papules, pale and hard, were seen by the eye, and detected as elevated by the touch. On stopping the medicine it was found they disappeared in from twelve to twenty-four hours. She stated that on a previous occasion, when in the hospital, the same phenomena were observed, and this statement was verified by an examination of the ward journal, when it was found that she had also been ordered iodide of potassium by Dr. McCall Anderson, who then had charge of the wards.

Deeming this case with such marked idiosyncrasy for iodism a suitable one to try if similar results would be produced by the internal use of iodine, I ordered her to have tincture of iodine in five-drop doses thrice daily. The following morning no effect was manifested. I accordingly increased the dose, first to ten, and subsequently to fifteen minims thrice daily, but without any result such as I had anticipated. I naturally came to the conclusion that the first theory mentioned was not proved correct, so far as this case was concerned, and that probably iodism was in part, if not altogether, due to the alliance of the iodine with potassium. It was difficult, however, to reconcile this, on reflection with the theory which commends itself more naturally to a mature and careful analysis of the phenomena observed, and the nature of the substances given. I resolved therefore to repeat the experiment, but in larger doses. After an interval of two days had elapsed I ordered her to have twenty drops of tincture of iodine at one dose, and that this should be repeated thrice daily. After the third dose symptoms of iodism were manifested. The nose became itchy, the eyes swollen, and she experienced again the same peculiar "salted sensation." On examination the small papules were also seen on the skin, but they were not quite so numerous as when the iodide was given.

On Antiseptic Midwifery and Septicæmia in Midwifery. By Robert Barnes, M. D., F. R. C. P., Obstetric Physician to St. George's Hospital, London.—Recently there has been much discussion on the theme of "Antiseptic Midwifery." So far as antiseptic appliances are concerned, they can strictly only be regarded as subsidiary means in the carrying out of the great principle that lies at the bottom of all good obstetric practice, namely, to screen the lying-in woman from those poisons and other noxious influences which threaten her from within and from without.

It is not, therefore, desirable to devote special or separate attention to what after all is only a part of a great therapeutical scheme. The essential thing is, to take such a large view of the physiological and pathological processes as will give the right indications to call upon each and all of the therapeutical agents at our command. To fix the mind too intently upon any one of those agents, is to incur the danger of neglecting others, and of losing sight of the principle which ought to guide the application of all, as one force directed to one end.

To form an intelligent and comprehensive scheme of treatment, we must then seek to attain a full knowledge of the conditions which, separately or in combination, threaten to work or are working disorder in the puerpera.

The foundation of puerperal disease is laid during gestation. With the completion of labor, the conditions predisposing to disease gather strength. During the puerperal state fresh elements of danger accumulate. All these three states bring their contingent to the development of every puerperal disease. This proposition will become evident in its truth as we proceed.

But we must start with a fundamental proposition which differentiates the diseases of the gravida from the diseases of the puerpera.

The diseases of the gravida are diseases of high nervous and high vascular tension. The diseases of the puerpera are diseases of low nervous and low vascular tension. In the gravida, the balance of osmosis is centrifugal; in the puerpera it is centripetal. The diseases of the gravida arise out of natural conditions exaggerated in intensity. Thus, the most striking examples of high tension in excess are seen in the albuminuria and eclampsia, and the hæmorrhages of pregnancy. An active process of building is going on, and everything is made subservient to this work. But the moment this work is complete, the reverse process of demolition, of carrying away the refuse, is begun. Absorption and excretion then are the ruling energies. Of course, an active absorption, commensurate with and subservient to the process of construction, goes on during gestation. But this is a very different thing from the absorption of the refuse-stuff which, having served its purpose, has to be cast out from the body. This refuse-stuff, if not duly excreted, may be as poisonous as are the elements of urine if not duly excreted. Hence we see that, in pregnancy, thrombosis, phlegmasia dolens, septicæmia are extremely rare, whereas, during the puerperal state, they are common.

Before entering upon the discussion of "antiseptic midwifery," we ought to form a clear conception of what constitutes "septicæmia in midwifery." When a puerpera is assailed by any fever-producing cause, her condition is a complex one. We cannot condense the various factors concerned into a simple expression that shall approach a rigorous definition. In dealing with most, if not with all vital processes, any attempt at concise definition is certain to be frustrated. Essential factors will be neglected, and the more terse and striking the definition the more certain it is to deceive. Instead of defining septicæmia, I will endeavor to describe it. Now the word "septicæmia," as used in obstetric discussions, is itself a definition. If by it we understand simply that a special poison has been taken up into the blood of a puerpera, we have a most imperfect idea of the case. We frame a picture in our minds which is far from representing what is passing in the poisoned puerpera.

If, then, we continue to use the word septicæmia, and it is too convenient to reject, we must interpret it broadly, giving it some elasticity. In the first place, I would propose that the word should not assume that a distinct specific poison, or sepsis alone is concerned, but that it should be used comprehensively as a general term, implying that the blood of the puerpera is empoisoned. Theoretically, or in imagination, we may conjure up a specific poison and call it "sepsin;" but can it be physically and clinically identified?

Koch* includes all cases of general traumatic infection in which no metastatic deposits occur under septicæmia, and those in the course of which such deposits occur under pyæmia. If it be established, and Koch goes far to establish it, that bacteria are hardly ever found in the blood in septicæmia, whilst they are commonly found in pyæmia, his distinction may rest on good scientific grounds. Investigations in this direction promise rich results in practice; but in the mean time the most useful line of speculation must be drawn from clinical observation. In many cases we may, to all appearances, have Koch's septicæmia running into his pyæmia. Are the two affections distinct *ab initio?* This deeply interesting question cannot, it seems, yet be answered. We may, however, when occasion requires, use the terms septicæmia and pyæmia in Koch's sense. But we want a general and comprehensive term. We cannot find one better suited than the old word "toxæmia." It implies no theory. It is simply the expression of the fact that some poison has been developed in or has been introduced into the blood. Having by observation of well-known symptoms verified this fact, we then proceed to analze, to differentiate if we can, and to fix the peculiar poison which is at work.

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* New Sydenham Society's edition.

If we accept septicæmia in the same sense as toxæmia, the term "antiseptic midwifery" assumes a correspondingly larger significance, and we shall be led to form a more useful, a more clinical conception of one of the most deeply interesting problems in obstetrics.

Let us endeavor to trace the several factors which enter into the problem.

1. There is the blood of the gravida modified by the processes of construction and nutrition of the embryo and uterus. They are: excess of fibrin, diminished proportion of red globules, increased proportion of water, increase of white globules.

These characters are found at the time of labor, and the blood so constituted, differing as it does from the blood of woman in her ordinary state, is the blood in which are wrought the post-partum and puerperal processes. Nor is the peculiar state of the blood all. The altered blood is associated with universal changes going on in the body. Tarnier reminds us that "Science records day by day new facts which lead us to conclude that in the pregnant woman there is not a single fibre or single drop of liquid which does not undergo some modification."

If there has been much hæmorrhage during or after the labor, the blood has become more watery and more charged with fibrin. The excess of albuminoid or colloid materials increases centripetal osmosis.

2. There is the fall of nervous and vascular tension involving a change in the dynamic state of the circulation.

3. There is a period of comparative rest following labor, of preparation for the active processes of breaking up of the tissue used during pregnancy, now superfluous, and of casting out the refuse-stuff. This period may be stated to be about forty-eight hours. We rarely see evidence of self-empoisonment before the third day.

4. At the end of the second day the process of disintegration of the uterus and other organs has begun. An immense revolution is at hand. The proceeds of the disintegration of the uterus and other superfluous structures are rapidly taken up into the circulation, and ought to be as rapidly converted and excreted. Absorption revives. The lymphatic vessels and venules have come into active function. If the lymphatic system and liver, especially, fail to modify the waste-stuff brought to them, so as to fit it to enter the circulating blood, then this unprepared unmodified waste-stuff is noxious, poisonous. Hence one form of toxæmia.

5. But even assuming that the waste-stuff enters the blood-mass properly prepared or digested, unless it be got rid of *pari passu*, there will be accumulation of waste-stuff in the system. This again is a form of toxæmia. Hence there must be easily-working excretory organs; the lungs, kidneys, skin must be sound.

6. Now it is obvious that both the evils pointed out may co-exist, that is, the conversion of the waste-stuff and the excretion may both be defective. Hence already we see a complex toxæmia, purely endogenetic, derived from no external source.

7. Fresh dangers are at hand. It is a remarkable fact—not without practical interest beyond our immediate theme—that all the successive steps in the history of reproduction are marked by violent lesions of tissue, ruptures, or lacerations. The bursting of the Graafian follicle and ovary, the frequent rupture of the fourchette and of the hymen in coitus, the tearing of the cervix uteri during the passage of the child, the disruption of the placenta from the uterus, the laceration of the perineum, are obvious illustrations of this proposition. Another fact, less obvious, but even more constant than some of the preceding, is the violent bruising to which the parturient mucous tract is exposed during labor. A process which may be likened to glacier-action takes place. The mucous membrane in contact with the head glides down under the influence of friction, separating it to some extent from the submucous tissue. In this movement the connecting vessels are torn. Hence the ecchymosis commonly seen in autopsies about the cervix uteri and vagina, if performed within a week of the labor. Not only is there commonly found extravasated blood, but a quantity of serum in the connective tissue. In about two or three days the epithelial layer of the mucous membrane, crushed, begins to be exfoliated. This is effected more or less completely at different parts; most completely at the cervix uteri.

Limiting the application of these facts to our theme, we see here the traumatism which plays so important a part in puerperal septicæmia. The lacerations of the cervix uteri and perineum have often been insisted upon, especially by the German school. The wound of the uterine surface left by the disruption of the placenta had been likened by Cruveilhier, Robert Ferguson, and others to an amputated stump. The baring of the mucous membrane has not hitherto, as far as I know, been considered. I am disposed, however, to think it is often the most important factor in the poisoning process. It is the most active and constant septicode or poison-route.

8. Here then are several roads open to the reception of poison from the mucous tract. If no poison collect on any part of this septicode receptive tract, the wounds heal readily and the door is closed. It matters little that there existed an extensive traumatic surface. But if blood or lochial discharge remain in the uterus or vagina, and air find its way into contact, decomposition takes place. A foul fluid bathes the wounded mucous tract and at some point or other finds an entry into the system. This is still a form of autogenetic toxæmia, but it differs from that form which is the result simply of the accumulation of badly-prepared or excessive waste-stuff in the blood, by the addition of foul stuff from the uterine discharges. The case has increased in complexity. There is, first, the fundamental state of the blood derived from the gravid process; second, the blood further modified by the waste-stuff from disintegration of tissue, and third, there is the septic stuff taken up from the wounded mucous tract Whenever the blood is poisoned, be it with septic stuff or other, the natural process of purification, of excretion of the waste-stuff is obstructed, the balance between disintegration, absorption, and excretion is lost. The simple septicæmia then, as imagined and described, cannot exist.

9. The puerpera is still open to toxic invasion from other sources. Poisons altogether foreign to her may be brought into contact with the traumatic tract and be absorbed. Thus the cadaveric poison from dissecting may be inoculated by the finger used in examination ; other poisons, the result of diseased action, clinging to the obstetric finger may be inoculated in like manner ; sponges or linen tainted with similar poisons have been the carriers of poison to the genitals. In some of these instances it

is probable that bacteria play an important part.

Thus another complication is added. All the elements of blood-alteration already recited are at work and are intensified by the new poison from without.

10. Then the puerpera is peculiarly susceptible to the ingestion of the zymotic poisons ; typhoid, variola, scarlatina, rubeola, erysipelas act with special virulence in the blood of the puerpera. It has been the fashion to say that scarlatina in a puerpera is scarlatina and nothing more. It is something more. The scarlatina-poison finds in the puerperal blood, loaded with refuse-stuff which it cannot excrete, a medium specially favorable to the development of mischief. The subject may have had scarlatina before. She may have enjoyed the full degree of protection until she became pregnant. Under this protection, contact with the scarlatina poison may have been harmless. If inhaled or otherwise absorbed, it failed to ferment. It was quickly eliminated. But if this poison enter the puerperal blood, its elimination is arrested, the morbid train is fired. We have developed a form of toxæmia compounded of the autogenetic forms previously described and of the scarlatina-poison. This is very different from simple scarlatina. In these cases the characteristic rash is often wanting. It may be doubted whether the zymotic poison goes through the successive stages of zymosis characteristic of the simple scarlatina. The poison works in a specially prepared field in a special manner. It throws out of order the puerperal process. It arrests or prevents the disintegration process, the due absorption by the lymphatics, the modifying action of the lymphatic glands and liver, the excretory function of the lungs, skin, and kidneys. Thus we get a complex poison which cannot be called waste-stuff poison, septicæmia, pyæmia, or scarlatina, but is a compound of all, and perhaps of some new innominate poison, the product of their inter-reactions.

11. Another factor must not be lost sight of. Emotional disturbances play an important part. An emotion-storm may so affect the heart and nutrition that the blood curdles, clots suddenly. The influence of emotions upon secretion and excretion is well known in some conditions. It is not so well known in the puerperal state. But that it may and does profoundly impress the circulation, nutrition, and excretion is certain. Emotion is in many cases the most conspicuous genetic cause of puerperal fever. Where it is not the primary cause, it may often be a secondary exacerbating cause. We may summarize the forms of puerperal toxæmia under three heads.

1. The self-empoisonment resulting from the loss of balance between absorption of waste-stuff and its excretion. This may be called *endosepsis*, since the poison arises within the system.

2. Self-empoisonment from absorption of the foul stuff of decomposition in the uterus. This may be called *autosepsis*, since the puerpera takes poison of her own making. This is what has been more especially called septicæmia.

3. Empoisonment from foreign sources. This may be called *exosepsis*.

There may be a simple endosepsis, but autosepsis also implies endosepsis ; and exosepsis is a compound of all three.

Endosepsis is not, I believe, communicable or infectious. Autosepsis is. The discharges from one puerpera, which are capable of poisoning herself, may poison another puerpera. Exosepsis is doubly infectious. It is infectious as autosepsis and as a zymotic.

Having taken account of the poisons which threaten the puerpera and of the gates by which they may effect an entry, we shall be better able to protect her. Two great objects have to be kept in view. First to keep all extraneous poisons out. Secondly, if any effect an entry, to counteract their noxious influences. A primary condition essential to the successful attainment of these two objects is to put the system itself in the best position for defense; that is, to secure the sufficient working of all the organs concerned in nutrition and excretion. The carrying out of this programme fully is antiseptic midwifery in the broad sense. The adaptation of the Listerian or conventional antiseptic precautions is antiseptic midwifery in the partial and narrow sense.

Unfortunately the first condition of effective resistance to toxæmia is not always attainable. We must take the puerperal subject as we find her; perhaps with damaged kidneys or liver, deficient in nerve-power, in fibre, and with skin and lungs unequal to the new task thrown upon them. This is another way of expressing an aphorism which I have taken other opportunities of illustrating, namely, that *pregnancy is the great test of the soundness of the subject.* Under this test many women break down at various stages of the process. Some get no further than abortion; some hold out a little longer; some fail in the effort of parturition; others break down under the strain of childbed.

About the third day, it is a familiar fact that some slight rise of temperature and a quickened pulse attest a degree of febrility. This has hitherto been considered as "milk fever," it being assumed that the starting of the new function in the breast causes febrile disturbance. Sometimes the term "ephemeral fever" has been used. Now, it deserves to be considered whether this febrility occurring on the third day be really due to the milk secretion; that is, is it physiological? Is it a constant phenomenon? It is not constant. If the breasts are sound and perform their function well, there is no fever. If there is fever, it obstructs the due secretion of milk. If the breast is not in a fit condition to secrete, then, indeed, fever is excited.

Dr. Fancourt Barnes has made observations which seem to determine this point. So long as antiseptic care was not observed at the British Lying-in Hospital, high temperatures ruled; when antiseptic care was strictly observed, high temperatures were rarely seen.

The truth is, that about the third day is the epoch for the establishment of the absorptive process. The two days following labor are a period of rest. During this time the disintegration of the uterus and other superfluous structures is only beginning. The supply of waste-stuff for absorption is scanty. This can hardly be a source of fever. And if there be any blood or other matter in the uterus, it will hardly decompose under two days or more, so as to yield septic stuff for absorption. But on the third day, waste-stuff is pouring into the blood; decomposition may have begun in the uterus, and active absorption finds material to work upon. Thus it is that febrility occurs on the third day. The mammary glands labor under the disturbance induced, their healthy action is impeded, and being under easy observation, their struggle against the fever is interpreted as the cause of the fever.

1. The obvious lesson to be drawn from this history is to begin antiseptic treatment early. Indeed, it begins with the conduct of the labor. The first great point to be aimed at is to secure firm contraction of the uterus. It is superfluous to dwell upon a point so universally recognized. But it is not superfluous to dwell upon certain means that lend powerful help in securing it. The immediate object sought in securing contraction is to obviate hæmorrhage. To obviate hæmorrhage is to oppose septicæmia.

Passing by the usual manœuvres exercised in dealing with the placenta, I will only insist upon the utility of the pad and binder. The compression exerted upon the abdomen and pelvis not only tends to provoke uterine contraction, but it counteracts the aspiration or suction-force which tends to draw air, one of the factors of decomposition, into the uterus. It opposes centripetal osmosis. The day after labor it is useful to give an aperient. It commonly happens that, in the effort of defecation, the uterus, compressed and sharing in the diastaltic expulsive action, expels a clot. It then contracts more effectually. The maintenance of contraction is efficiently aided by oxytocics. It has been my custom for many years to give after labor a mixture of quinine, ergot, and digitalis three times daily, continued for two or three weeks. The effect in contracting the uterus is remarkable. The patient will often say that she feels the womb contract soon after taking a dose. I look upon this measure as foremost in the scheme of antiseptic midwifery. It is shutting the gate in the face of the enemy.

2. The next thing is to *wash out the uterus.* Plain tepid water may serve the purpose, but a solution of carbolic acid, one in fifty, is better. This should be done once or twice a day from the second day. On the first day, as we have seen, there is little risk of absorption, and it is important to disturb the patient as little as possible. Should there be the slightest rise of temperature and pulse, this intra-uterine injection is imperative. Those who have used it can tell of temperature and pulse reduced, rigors and other signs of toxæmia subsiding after each injection, and ultimately enabling the patient to pull through the most threatening illness. The injection is best done by a gravitation or siphon tube. Thus a gentle, uniform stream is insured, all jerking propulsions are avoided, and it is easy to exclude air.

The beneficial action of the carbolic acid or iodine injections is threefold: First, the uterus and passages are washed out; secondly, the lining membrane of the passages is stimulated in a healthy manner, so that it is less favorable to the reproduction of foul stuff ; thirdly, some small portion of the carbolic acid or iodine penetrates the substance of the uterus, and is absorbed into the system, thus chasing and neutralizing any poison that may have entered. Thus we follow the enemy through the gate which admitted it. The uterus and vagina, whilst serving as a septicode, are also made to serve as a passage for the antidote. This especially applies to iodine, which readily penetrates the uterine wall. We ought not to refer to intrauterine injections to wash away septic stuff without grateful remembrance of Harvey the Immortal, who thus cured a lady in imminent danger of death from septicæmia.

The manipulations necessary for intrauterine injection give valuable information as to the position and other characters of the uterus. A not uncommon cause of retention of discharge is retroflexion or anteflexion. Reduction should, of course,be effected before injecting, and means taken to keep the uterus in situ afterwards.

In connection with intrauterine injections, carbolic solution should be kept in the room. The catheter should be kept in it. If sponges are used, they should be kept in the solution ; but it is better to exclude them, and use soft tow soaked in the solution, and throw it away immediately after use. Instead of diapers, which it has been proved are a frequent source of contamination, as "they come from the wash," but not from purification, some contrivance as the "ladies' towel" should be used. These consist of light cotton-wool or tow, impregnated with carbolic acid or other antiseptic. They are burned after use. The physician and the nurse should practice no manipulation without previously washing in carbolic solution, and lubricating the hand with carbolized vaseline, religiously rejecting lard and other animal grease. The chamber utensils should be rinsed with carbolic solution, and a little of the solution always kept in them.

It is probable that sulphurous acid will be found even better than carbolic acid as an antiseptic. Carbolic acid in ovariotomy certainly acts sometimes as a poison to the patient and to those assisting at the operation. At St. George's Hospital, we have lately used sulphurous acid with at least equal advantage, and without a toxical drawback. Dutrochet, in his investigations on osmosis, found that the slightest trace of sulphurous acid stopped osmosis. It may be used in the proportion of one sulphurous acid to forty of water.

3. Whilst taking care to exclude foul stuff from the genital canal, we must *be careful to exclude foul air from the lungs and skin.* A supply of pure air is an obvi-

ous necessity, but too frequently frustrated. When the sun shines, open the window. At night, especially, a fire is often the condition to good ventilation. If an Arnott's valve be adapted, the fire will draw off the light foul air which rises to the ceiling, insuring a supply of fresh air from below.

It is of the utmost importance to guard against chill or any check upon the due action of the skin, lungs, kidneys, and intestinal canal; that is, maintain in due working order the excretory organs.

4. Dr. Goodell has much insisted upon the *drainage of the uterus* as a means of getting rid of noxious stuff. The principal is admirable. There is no doubt that in the ordinary recumbent posture blood and discharges are apt to collect in the lax uterus and vagina. Dr. Goodell recommends that the patient should at times be raised into the sitting posture, to allow the fluids to drain off. Where a woman is strong and after a few days, this plan may *perhaps*—I emphasize *perhaps*—be adopted without disadvantage; but in the weakly subjects most prone to septicæmia, especially after hæmorrhage, sitting up has been followed by syncope and sudden death. If firm pressure be maintained upon the hypogastrium and antiseptic irrigations be duly observed, drainage is secured. At the same time, if the bed is properly made, so that the head and shoulders are kept at a slightly higher level than the pelvis, drainage will be fairly accomplished. The dorsal decúbitus is more favorable to drainage than the lateral.

5. An effective barrier against the ingestion of noxious stuff from the parturient canal is *to supply the system with healthy nutriment by the stomach.* The more the system is supplied in this way, the less will it absorb from vicious sources. I believe Oldham was one of the first to lead the revolt against the old fashion of starving on gruel during the first week; but it is easy to err in reaction. During the first two days the system craves rest as well as food. Food that is not easily assimilable is apt to load the stomach lying undigested or badly digested. Light broth, beef-tea, milk, toast, or eggs, plain or variously combined, are enough for the first two days. Gradually more solid food may be added. Light stimulants are occasionally useful, but generally alcohol may be dispensed with.

We may summarize antiseptic midwifery in the following rules:

1. Keep the door shut against the enemy by maintaining contraction of the uterus.

2. Prevent the enemy from forming and collecting by irrigating the parturient canal with antiseptic fluids.

3. Eject the enemy as fast as he effects an entry; that is, keep the excretory organs in activity.

4. Guard the lying-in chamber against the approach of foreign poisons.

5. Fortify the patient against the attack of the enemy by keeping up due supplies of wholesome food.

Antiseptic Midwifery in Lying-in Hospitals.—Given fairly healthy subjects, scrupulously guarded in the manner described, women lying-in in their own homes will present but rare examples of fatal septicæmia. But when lying-in women are massed together in one building, the difficulty of safeguarding them is vastly greater. Perils gather around them in an accelerating ratio. If the history of many lying-in hospitals could be fairly written, we should have a terrible record of lives sacrificed to ignorance, to reckless disregard of medical authority, to architectural folly, to mal-administration, to scandalous experimentation of fanciful crotchets. Uninforned benevolence ove·riding the practical benevolence of science has always been prolific of disaster. Nowhere can it count more victims than in lying-in hospitals.

In hospitals, septicæmia, or other forms of puerperal fever manifest an active tendency to spread. Many of the so-called epidemics of puerperal fever in lying-in hospitals have undoubtedly been examples of the spread of zymotic fevers. But another class of apparent epidemics undoubtedly owe their origin and spread to contamination, by what may rightly be called the "puerperal poison," meaning by this, the product of decomposition of blood and discharges in the parturient canal. The poison that one puerpera may thus make for herself may be carried to another puerpera, and so on, through a ward. *Proxima ardet;* the fire quickly spreads when the fuel is at hand.

The first imperative condition for the safety of women in lying-in hospitals is the absolute single authority of the physician. If this is denied him, his duty to humanity and to his profession is to resign. This is the condition upon which he attends a private patient in her own house. It is infinitely more necessary that he should insist upon it, when the care of many women in a hospital is thrown upon him.

A leading principle is to assimilate the conditions of each patient in a lying-in hospital as nearly as possible to those of the patient delivered at her own home. Isolate as much as possible. Take all care that any ill that may attack one patient shall be limited to her.

A brief account of the scheme of the Paris Maternité devised by Tarnier, and described by him to the Obstetric Section of the International Medical Congress, in London, 1881, will be the best illustration of this principle carried into practice. M. Tarnier said that in 1856, when he was interne at the Maternité, the mortality was about 5 in 100; this was now reduced to 2 in 100 in the hospital generally, and to 0.75 in 100 in the pavilion he had had constructed a few years ago. The chief point in this pavilion is that each patient has a separate room, entered from the outside, so that a nurse can only pass from one room to another by going outside into the open air. The furniture is all of japanned iron, the floors, walls, and ceilings are of impermeable concrete. The mattresses and pillows are stuffed with oat-chaff, which is burnt after use in every single case. Instead of a mackintosh sheet, a sheet of brown paper made impermeable by pitch is used, and this too is burnt after use. He has used various antiseptic solutions for the washing of the genitals: borax, carbolic acid, sulphurous acid, and bichloride of mercury. As the result of his experience, he concludes that a weak solution of bichloride of mercury is the most powerful germicide.

The description given by Dr. Fancourt Barnes of the system in force at the British Lying in Hospital is a further practical illustration of the rules necessary to secure safety. Every patient is delivered under the carbolic spray. This disinfects nurses and pupils who are assisting, and prevents the entrance of germs or foul matter into the genital tract at the moment when it is distended and opened by the passage of the child. All washings, syringings, and examinations are done with carbolic solution. Carbolic spray, of one in eighty, is nearly continuously playing in each ward.

To secure contraction of the uterus, each patient has a mixture of quinine, ergot, and opium three times a day, for the first week. Since instituting the above practice, he rarely finds any rise of temperature during the lying-in.

We may thus hope to see the day when women can be delivered in lying-in hospitals as safely as in home-practice.—*N. Y. Obs. Jour.*

THE SURGICAL ENGINE. BY JAMES E. GARRETSON, M.D., of Philadelphia, Surgeon-in-charge of the Philadelphia Hospital of Oral Surgery; Professor of Anatomy and Surgery in the Philadelphia Dental College.—The surgical engine is a natural outgrowth of what is familiar to most persons as the dental engine.

A dental engine is shown in Fig. 1. It is an instrument not unlike a lathe as to its manner of working. The dependent part seen to the left in the diagram constitutes the expression of its peculiar virtue. This part is made up of a wire cable enclosed in a flexible thread tube. When put in motion, this wire cable is capable of making five thousand revolutions to the minute. The termination of the cable is in a hand-piece, or carrier. Fig. 2 shows the hand-piece; *B* is a support to instruments to be used with it; *C* is a slot for fixation; *E* is a turn-clamp. The piece standing alone marked *A* is a bur; it represents, in its shank, any and every instrument used with the engine.

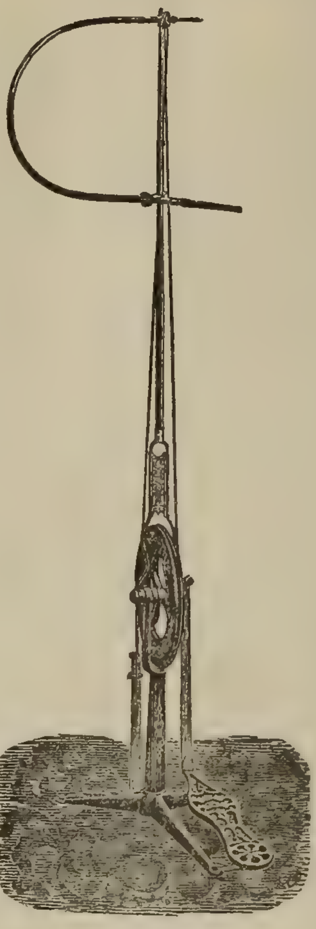
Fig. 1.—The dental engine.

A dental engine, being possessed of but limited power, has its office confined to the treatment of dental lesions and to the lighter operations practiced in oral surgery. In its place, this engine affords an expeditious and a happy means of accomplishing a variety of performances. A surgeon, finding it convenient to own one, will be well compensated for his outlay. The dental engine, surgically considered, will disappoint the practitioner, unaccustomed to its use, if undue demand be made on it; the cable will break, or, what is more common, refuse to revolve the instrument in the grasp of the hand-piece.

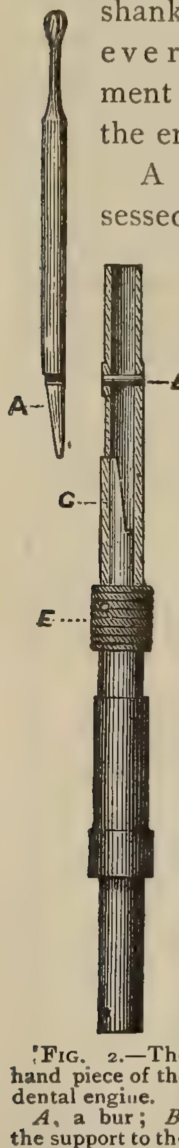

Fig. 2.—The hand piece of the dental engine. *A*, a bur; *B*, the support to the instrument; *C*, slot for fixation; *E*, the turn-clamp

Illustrations in use.—Being an invention in dentistry proper, the present common use of this particular machine is the preparation of the cavities of carious teeth preliminary to the process known as filling. When dental caries extends to close proximity with the pulp of a tooth, the necessity for the lightest possible touch is paramount; the difference of a hair's breadth is oftentimes all-important to prevent the exposure of that organ. In the majority of instances, such manipulation has to be accomplished unaided by the sense of sight. The engine works with such absolute certainty that the requirements are met without effort or concern on the part of him who directs and controls the lightning-like speed of the point that cuts.

The Removal of Teeth.—It not infrequently occurs that teeth require to be extracted where the relation with a dense alveolar process so nearly approaches the character of a true anchylosis that the force required to break the connection is beyond the ability of the operator to exert or the strength of the jaw of the patient to withstand. Cases of this kind afford signal triumph to this engine: through its aid the writer has succeeded, after a moment of almost painless manipulation, in removing with the greatest possible ease teeth which could not have been extracted after the ordinary manner. To remove a tooth, using the engine, one of the five-sided bits, preferably the smallest, shown in Fig. 3, is placed in the carrier, and, while held closely against the organ to be removed, is revolved until it cuts its way between tooth and socket; this done, the finger forceps not infrequently suffices to lift it from the alveolus. The drill is to possess three or five sharp sides, continued its whole length; thus provided, it cuts from point to base, as the operator carries it around the tooth.

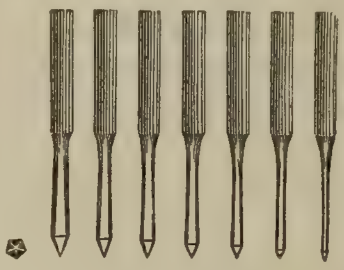
Fig. 3.—Five-sided bits.

Treatment of an Absorbing Alveolar Process.—Loosening of the teeth, arising out of absorption of their alveoli, is a condition met admirably through the aid of the engine. Frequently it is found that the origin of the bone disease, as well as the falling away of the gum from the neck of the tooth, has explanation in the presence of common tartar. The indications in such cases are twofold—1st, to remove all calculus; 2d, to freshen the circular edge of the absorbing bone. To accomplish the first of these indications, sugar-loaf drills, as portrayed in Fig. 4, are to be used—the smaller the better. One of these being placed in the mandrel is carried, while in rapid revolution, around the neck and root of the tooth; the scaling effected by it is very complete, while at the same time just enough abrasion is produced in the surrounding soft parts to excite the required reaction, which changes to a healthy surface a suppurating one.

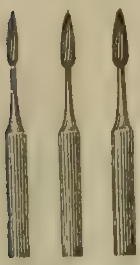
Fig. 4.—Sugar-loaf drills.

To accomplish the second of the indications—namely, the freshening of the bone—the writer employs the rose drill shown in Fig. 5—smaller, however, than the smallest of these. Resting a drill of this kind against the diseased bone, the circumference is easily removed by means of the slightest pressure made on the revolving instrument. It may not be amiss to allude to the necessity for washing away the detritus by means of a syringe. Through such double operation the writer has found himself able to restore many loose teeth to a fair degree of health. True, the same ends are to be reached by different means; but no other kind of instrument so easily, readily, and painlessly accomplishes the work as those here suggested.

Treatment of Caries of Bone.—A glance at Fig. 5 will make plain to the surgeon the usefulness of the instrument in the treatment of osseous caries. As operations on the maxillæ are concerned, the help afforded by it is simply invaluable. By its aid the surgeon feels himself able to do almost anything, and to do what is to be done without effort to himself and with the minimum of discomfort to a patient. On a number of occasions the writer has performed what were really quite extensive operations, while the patient, without an anæsthetic of any kind, was unconscious that the removal of bone was being effected. Extreme as is the assertion in seeming, it is really the case that a whole diseased jaw can be cut from its bed withont any particular evidence being afforded to the bystander that an operation of consequence is in progress. A sinus big enough to admit a rose drill is all the external wound required. The pain connected with this means of operating can only be trifling. It is the very nervous alone that think ether necessary. The rose drills used in the operation are to be obtained of all sizes. Those shown in the cut are well adapted to the work.

Figs. 6 and 7 show modifications on the straight hand-piece used with the engine. In Fig. 6 is shown a small circular saw placed at an obtuse angle. Fig. 7 exhibits a bur placed in a like position. To operate a dental engine, the foot is used precisely as in any pedal lathe. Instrumentation is directed as a pen is carried, through means of its holder.

The Surgical Engine.—Fig. 8 represents the surgical engine; the best of these machines known to the writer is that made by Bonwill, of Philadelphia. In the cut, *B*

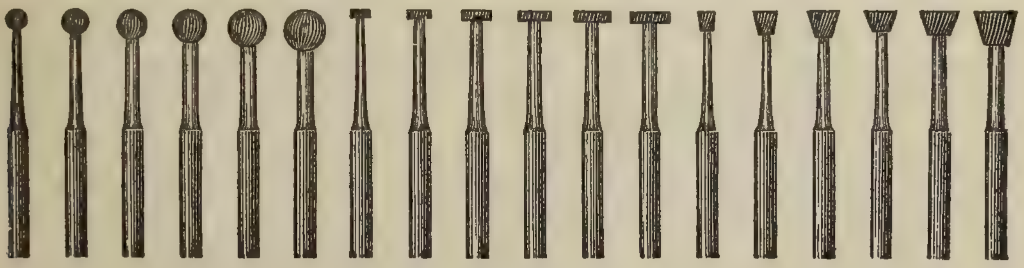
Fig. 5.—Rose drills.

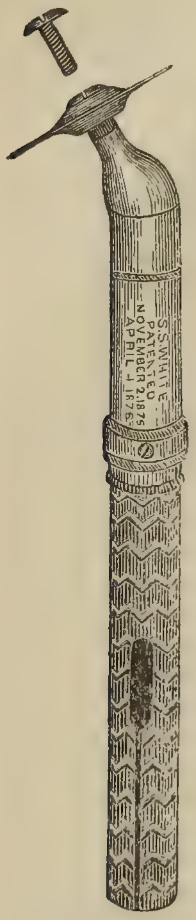

FIG. 6.--Hand-piece with circular saw at an obtuse angle.

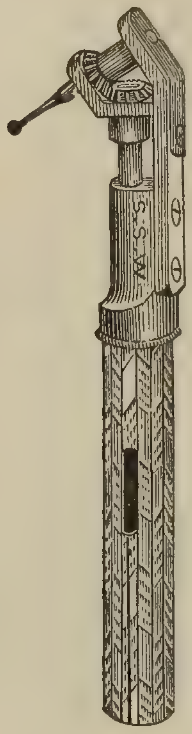

FIG 7.--Hand-piece with bur at an obtuse angle.

indicates the tripod, or base, supporting the driving wheel with cog-gear and crank. Above this is an upright standard, upon which is placed the flexible arm (*A*), which is a duplication of the human arm, with pulleys at the shoulder and elbow joints for carrying the hand to the hand-piece (*H*). *T* is an arm pivoted near *V*, and at the opposite end, bearing against the spiral spring (*S*), which keeps the arm at any easy, flexible position desired. A screw keeps the arm at any angle. *V* is a sliding tube with a heavy spiral spring inside, with the base of arm (*A*) resting thereon; and, by raising the tube, the band can be always kept so tight as to prevent its slipping on the pulleys. The thumb screw (*U*) secures the tube. At the extreme right of the engine is a sectional view of hand-piece (*H*), as seen on the wrist end of arm (*A*), for imparting rotary motion to the drills (*J*); the saws (*R*), and the bur (*I*). It shows the cone bearings (*C* and c¹) which insure perfect centering of the tools, with a universal chuck for absolutely holding the same, as well as the general simplicity of the inside work. These are but a few of the instruments used.

The circular saws (*R*) are three-quarter inch, one and one-half inch, and three inches in diameter, and extremely thin. But, with these shown in cut of various sizes, quite every operation can be performed.

A surgical engine differs from the dental in the replacement of the wire cable by a steel arm. This arm is made to represent the upper extremity of man, and is complete in its variety of movements. The immediate revolving power of the mandril lies in the cord seen in the cut. The pedal is replaced by a crank which is worked by an assistant. The number of revolutions attainable is fifteen thousand to the minute. The momentum is next to irresistible. The cost of the machine, independent of the operating instruments, is fifty dollars. The cutting instruments used by the writer have cost him, perhaps, as many more dollars.

A surgical engine can be used for all light operations. Many dentists give the machine the preference for their particular sphere of work. The cable arm in the dental instrument commends it, however to the writer for the simple and most easily-performed manipulations. On the other hand, facility in the use of this last-named engine enables a surgeon to accomplish more important ends with it. The illustrative performances following were first done with a dental engine, this being the only machine in the market at the date of the operations for which the particular cuts were made. It is to be understood that, at the present time, a thought of employing it in similar operations would only be entertained in the absence of the power lying in the surgical machine.

Instruments used with the surgical engine are drills, burs of different forms and sizes, circular saws of diameters varying from one to six inches, reciprocating (resembling the common metacarpal) saws, the length being from ten to four inches, and special tools.

Fig. 9 is a reciprocating saw (*S*) which moves three-eighths of an inch and cutting both ways for resections and amputations. *H* is the body or handle; *E* is the frame in which the eccentric revolves to carry the saw; *D* is an arm attached to *H* at *O* by a screw, with a threaded end from *C* to *D* for screwing into bones to hold them firmly while being cut. *A* and *B* are feet made adjustable by screw *C*, that any of the round bones can be fastened between the jaws or feet, instead of drilling

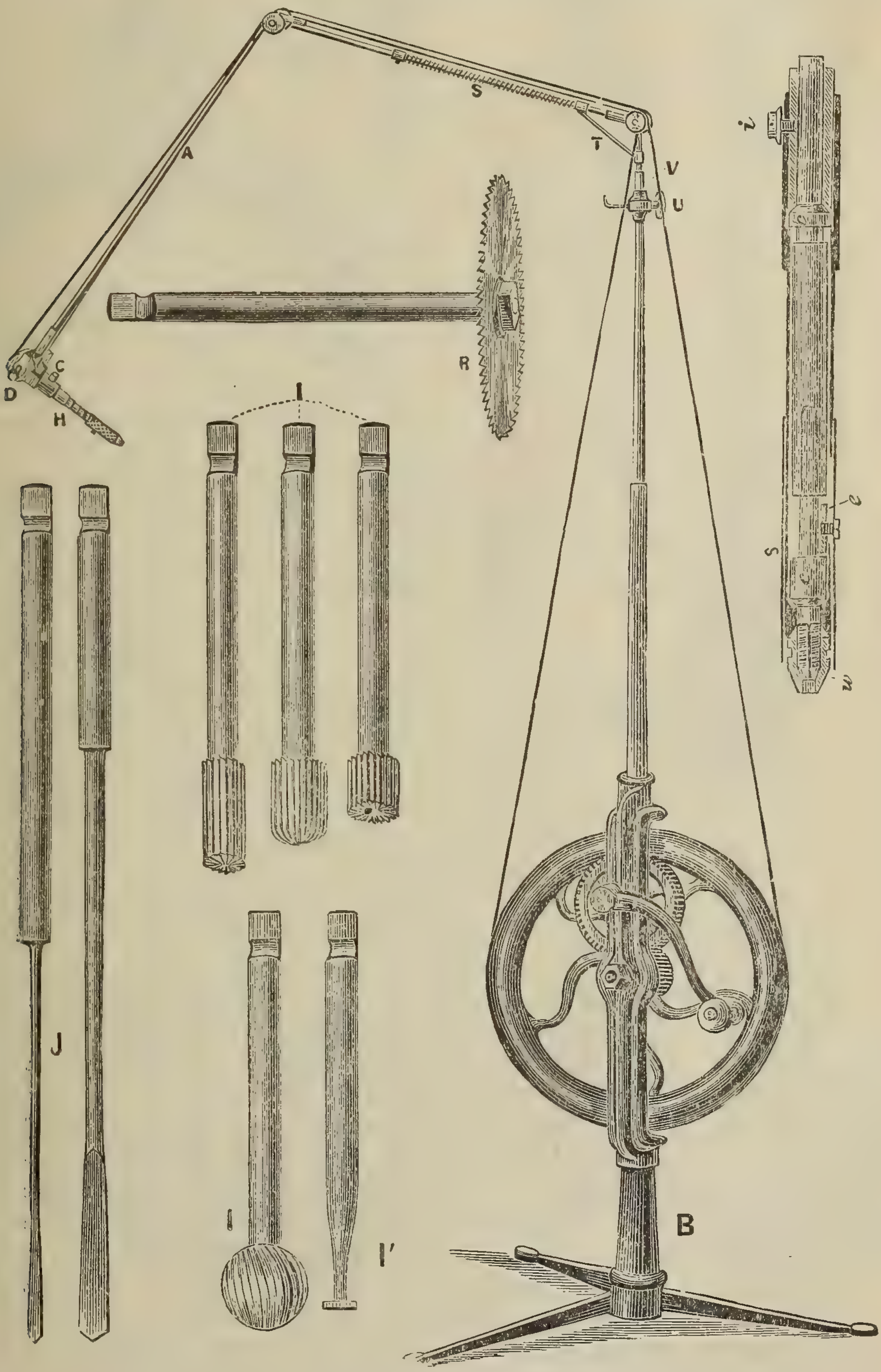

Fig. 8.—The Surgical Engine and Attachments.

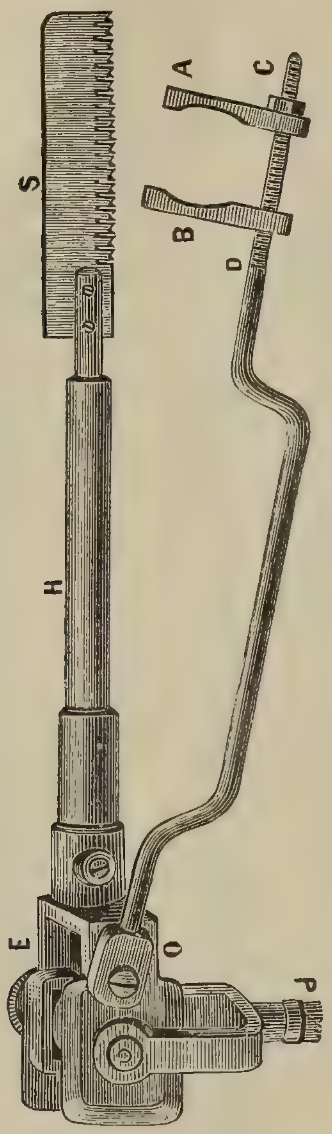

FIG 9.—The Reciprocating Saw.

a hole in the bone, as just described, for certain cases of re-section. *P* is the end to be placed on the arm (*A*) of engine, by removing hand-piece (*H*).

Special tools are devices to meet special ends: an example of a special tool is a drill of sufficient length to reach the human bladder, encased in a canula for convenence of passing, and for protection of the urethral passage. A second illustration may be instanced in a bur fitted for cutting into dust the carious head of a femur in hip-joint disease. Dr. Bonwill's elevator for fractures of the skull, shown in Fig. 10, is tanoher. It is intended to obviate the necessity of trephining. Can be done only by the assistance of the surgical engine. Should a case arise demanding the thorough removal of the section, it can be effected far more perfectly than by the old round trephining saw by the use of a circular saw or a bur in the engine, and the line of fracture follwed and it only removed. The elevator, even here, is of value to extract the piece or to hold it up while the sawing is being done.

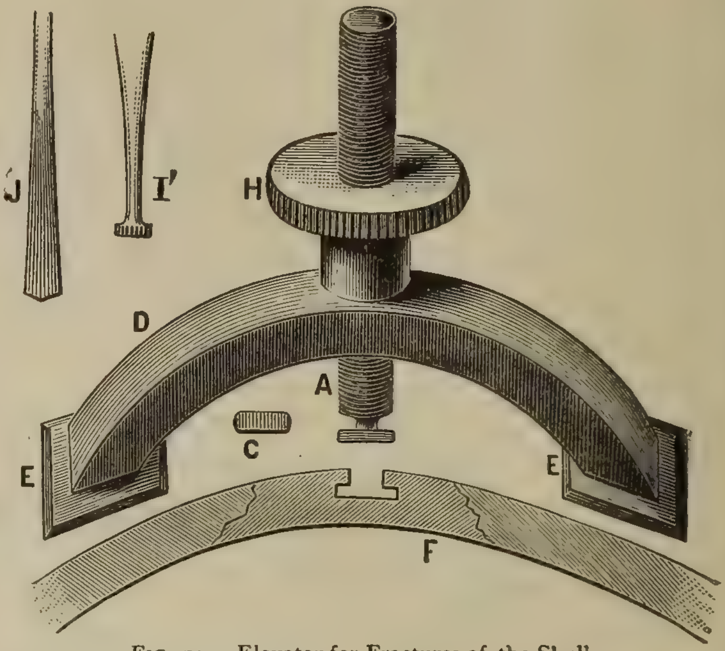

FIG. 10.—Elevator for Fractures of the Skull.

To use it, first take a nearly flat-pointed spear drill (*J*), the diameter of the hook (*C*) on screw (*A*), and place it in the engine, and cut about two-thirds through the plate of fractured bone, which, with the high speed of the engine and a sharp drill, can be done with but slight pressure. Then, with a drill the size of the neck of bur (*I*), drill two holes on one side of the first large hole thus Ooo, and afterwards insert bur (*I*) in the larger opening and let it under-cut where the smaller holes were made, as shown in section *F*. This will permit the hook (*C*) to pass under and be held in position, while the feet (*E*) of the arch (*D*) rests on either side of the fracture on solid structure. The thumb screw (*H*) is now turned by degrees until the part is in situ, or even higher, that no pressure be permitted on the inflamed parts. Any number of sections can be elevated one after another; or, by making the hole on the lines of fracture, several sections at once.

There need be no apprehension of the drill passing abruptly through the plate of bone, as the surgeon should know well the average thickness of the part. When great accuracy is needed, a gauge or guide can be fastened on to the drill, giving the hole any desired depth. But, where the hand is rested upon the sound arch, the engine at high speed, only slight pressure is used; and the drill withdrawn once or twice, no guide is required.

Illustrations in Use. — Fig. 11 shows a new operation devised out of relation with the engine for removal of the inferior dental nerve. The deviser begs to commend it as a performance which needs alone but a single trial to place it before all others employed in practice; it is simplicity itself, and, in the estimation of the writer, a perfect operation; it avoids scar, is quickly done, and makes such free and open exhibit of the nerve as admits of absolute verification or refutation of a diagnosis that may have been made. In the diagram is shown a cut which is made along the shade line immediately underlying the jaw. To avoid accident in making this cut, the line, after being marked with a pencil, is pulled upon the bone. The posterior extremity of the incision is to be just anterior to the facial artery, which vessel, if it be found necessary, is dragged from its notch backward, or, if it be desirable to extend the exposure, it may be ligated and pushed out of the way. The cut made is spread, as shown, and a raspatory being used to scrape up a slip of periosteum, the circular saw is applied, two lengthwise cuts being made by it so as to allow of the lifting of the roof of the canal. These two cuts are associated at either end by means of a small trephine or bur. A second manner of doing this operation, with the aid of the engine, one more speedily accomplished, employs a bur half an inch in diameter by three-quarters of an inch in length. Using this with ordinary caution, the roof of the cavity can be scooped off in a few moments. Necessary care being taken of the artery when the nerve is exsected, and the parts being carefully syringed, the lips of the wound are brought together to unite after the manner of first intention.

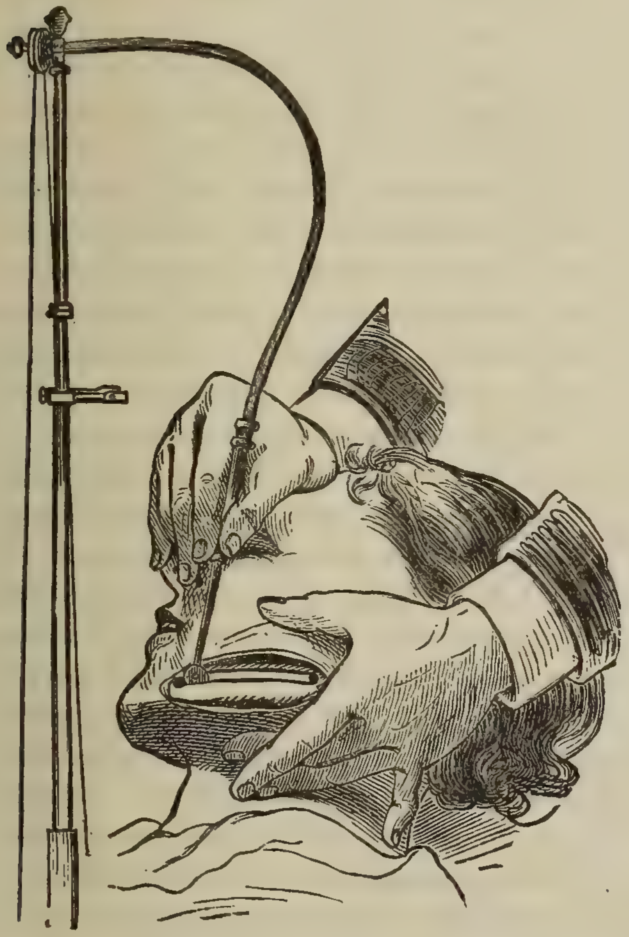

FIG. II.—Excision of Inferior Dental Nerve.

Fig. 12 stands as the representative of jaw exsections. The particular case shown exposes the body of the bone by means of a cut separating the lower lips in in its median line, this cut being related with two others carried outwardly on either side along the shade line. As is seen, a rim of continuity preserves the contour of the mental region.

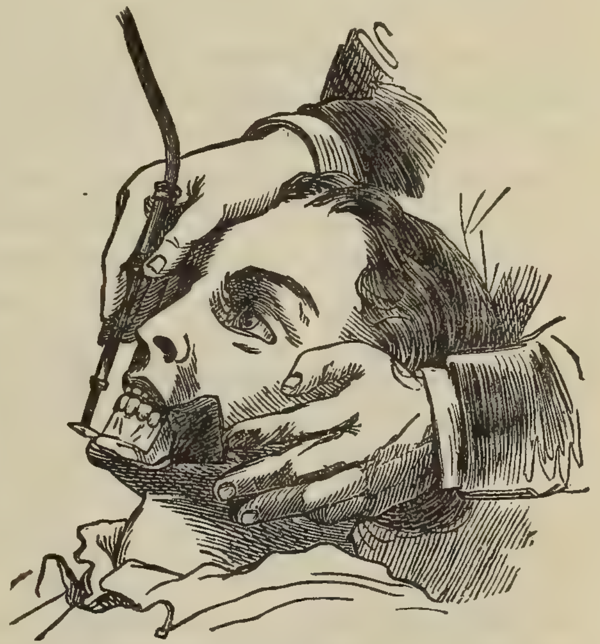

FIG. 12.—Exsection of greater part of lower jaw.

As the instances are rare in which the removal of bone is not indicated in treatment of the epulides, the engine, together with its circular saws and rose burs, offers an easy and expeditious means of operating, which, it seems to the writer, must necessarily command, sooner or later, a general employment. In the smaller epulic growths experience has demonstrated the inexcusable impropriety of a section that breaks the line of continuity at the base of the jaw; such section certainly is not necessary in more than one out of every fifty cases. Fig. 13 exhibits a specimen of what is meant by "the smaller growths." Such tumors, while assuredly they demand removal of bone, are to be ablated, as shown in Fig. 14. In the performance of ablation, or exsection, as exhibited in the diagram (Fig. 14), it was a custom with the writer to employ, in common with all other surgeons, the straight and cross-cutting forceps. These instruments allow of undeniably rapid accomplishment of operations, but serious objections to their use lie in the facts: 1st, of an inability to cut the jaw bone proper, only the alveolar process being capable of such manner of removal; 2d, in the cut made with the vertically used forceps there is always more or less danger of fracturing the jaw; and 3d, cuts made with forceps are apt to inflict a damage which it requires much suppurative action to get clear of.

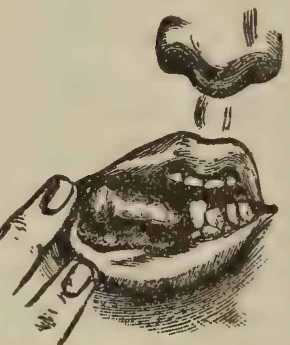
FIG. 13.—Small Epulic growth on lower jaw.

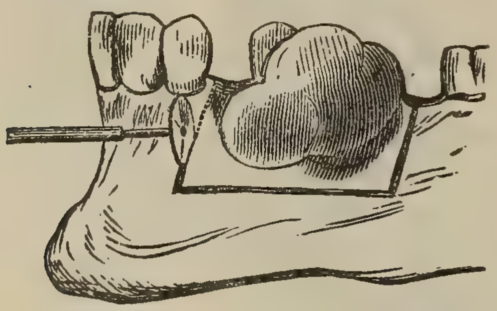
FIG. 14.—Method of removal of growth by the circular saw.

In the employment of the circular saw in this direction, it is only necessary to incise the soft parts in the lines of the cuts to be made. If the size of the morbid growth demand such extent of operation, the saw can be run both vertically and transversely to within a line of the base of the jaw without the slightest danger of fracture, and, because of the delicacy with which the cutting is done, with almost as little danger of a resulting necrosis of the frail but most important septum which has been left, and upon which depends entirely the preservation of the contour of the lower part of the face.

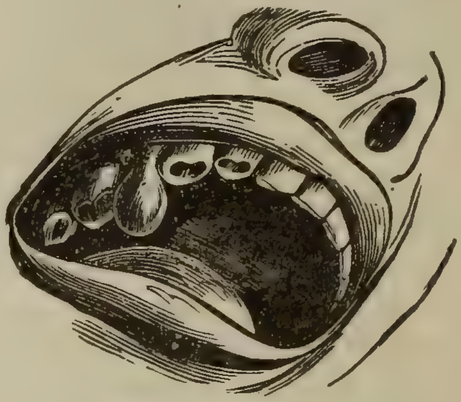
FIG. 15.—Growth suitable for removal by the rose bur.

The use of the rose bur is often resorted to in these cases by the writer. Very small growths (Fig. 15 serves as an illustration) require no other means. Cutting off the soft parts of the tumor, a few thousand revolutions of the drill will remove the involved bone with the greatest thoroughness. Indeed, not only the minor, but the major cases also are amenable to this method of radical extirpation.

Necrosed Bone.—The bur of the engine furnishes a rapid means of getting clear of fixed sequestra. Recently the writer removed the full half of a lower jaw, including the condyloid process, where the bone was encased in a shell of new osseous structure. The manipulation was accomplished, without shock or hæmorrhage, as follows: Two adjoining sinuses below the jaw were united by an incision, and a cloaca in the new bone enlarged sufficiently to admit the working of a bur and shank; a cutting means thus admitted amongst the dead structure, it was quickly broken into dust and washed away. No untoward symptoms have presented; the patient is moving about as though no operation had been performed.

Exostosis.—Exostosis of ivory hardness is fo be cut away without effort by the means being considered. A case treated at the Oral Hospital, where the right superior maxilla was involved in mass, required for the accomplishment of the operation one hour and forty minutes. There was not the slightest expression on the part of the power lying in the engine of inability to do the work. The whole jaw was removed, no external cuts being made, and not a single vessel requiring to be ligated.

Hip-Joint Caries.—A proper sized bur fixed at the end of a shank of sufficient length spares the necessity of the ordinary manner of exposing this articulation. The instrument, well oiled, is introduced to the seat of disease. When the affected bone has been cut up, and the healthy structure is being intruded upon, a change in sensation is experienced instantly by the fingers of the operator. Great attention is to be given to getting clear of the debris.

Removal of the Coccyx.—A device recently practiced by the writer, which has pleased him almost better than any operation he has ever attempted, is the removal of the coccyx without disturbance of the perineal anatomy. This operation was done at Penn Manor on the person of a patient of Dr. William Kirk, a lady who had suffered from the complications of coccyodynia for a period of thirteen years. Exposure of the coccyx revealed it as fractured and standing at right angle with the sacrum. The proposition of the manipulation, as enunciated by the deviser, considers the removal of the bone from the stand-point of simple enucleation; in other words, the removal of the part from its envelope of periosteum without disturbing the under layer, which is the surface of attachment for the soft parts constituting the posterior perineum. It will be seen that the purpose is secured absolutely, and that no disturbance of anatomical function can result. The patient being etherized and placed partly upon her abdomen, an arm being under the body at the region of the diaphragm, to secure freedom in respiration, an incision was made through the skin and superficial fascia the length of the coccyx. These tissues being carried to either side by neans of retractors, a second incision was made through the periosteum, and by means of a chisel-shaped knife this structure was raised and everted. In this last is the peculiarity of the operation: it is as though one might cut down the centre of the upper surface of an envelope, exposing, in the turning aside of the paper, a letter lying upon the lower face of the envelope, the turned-aside upper part being of continuity with the bottom of the paper. A succeeding step employs the engine. A circular bur, the face side alone of which is cut, is placed in the grasp of the handpiece, and, while in revolution to the extent of ten thousand times to the minute, is applied, with delicacy of manipulative touch, to the surface of the bone. In the case being recorded, five minutes sufficed for the disappearance of the coccyx in the shape of bone dust, the under face of the periosteum remaining as undisturbed as though it had never been in relation with the coccyx. The wound, a superfirial one, was put up to heal by first intention.*

Exposure of the Zygomatic and Spheno-Maxillary Fossæ.—To open into these fossæ with a view of exsecting the branches of the trifacial nerve, the writer makes a trapway of the substance ot the masseter muscle and enters the region of the base of the skull through an opening in the ramus of the lower jaw, which opening includes the posterior dental foramen. If the object be exsection of the third division, no difficulty is found in carrying the blades of delicate scissors, guided by the line of the exposed nerve, up as far as the oval foramen. When the intention is exsection of either the second or first branches, the direct exposure implies removal as well of the head of the internal pterygoid muscle. The latter operation is also to be accompanied by passing, with burs, through the external and deep walls of the antrum.

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* *Philadelphia Medical Times*, Vol. xii., No. 371, February 11, 1882, page 303.

Stone in the Bladder.—A calculus in the female bladder, hard in character, proposed to be broken up, can be drilled and weakened most satisfactorily and expeditiously by means of the revolving drill; perforation of the coats of the viscus is most easily avoided.

Trephining.—A revolving bur replaces the trephine. Indications are met perfectly. A floating piece of bone can be burred away without pressure being made on underlying parts.†—*Annals of Surgery.*

PARACENTESIS CRANII IN CASES OF HYDROCEPHALUS, BY HUGH P. DUNN, F. R. C. S., Clinical Assistant to the Royal South London Ophthalmic Hospital, Late House Surgeon to the Belgrave Hospital for Children, etc.

The disfavor which formerly belonged to this operation was doubtless owing to the belief that the risks associated with its performance were not outweighed by the benefits which it was sought to produce. But, in these times, when the adaptation of apparatus to the necessities of a special case is a matter of no difficulty, and improvements various and of much import have been effected in surgical instruments, it may be said that the risks of surgery have been reduced, in certain cases at least, by the introduction of special instruments. Not only have operations been rendered less risky, but their performance has been made easier, and the outcome of the introduction of a special instrument for a certain case has frequently been that this same instrument has been found useful in the treatment of totally different cases. Now there is so much difference in the manner in which surgical interference is tolerated by various structures, that the idiosyncrasies of each with regard to this demand the careful attention of the surgeon. Having learned in what peculiarity the intolerance of a certain structure to surgical interference consists, it is then necessary with the facts before us to meet the difficulties of the case with whatever means may be available for the purpose. For as experience alone can teach us the *extent* to which structures will not resent operative treatment, so also experience can only teach us the *means* to render them tolerant. The results, for instance, of abdominal surgery distinctly show that whereas peritonitis after such an operation as ovariotomy is rare, its occurrence is always to be expected when the peritoneum has been wounded by external violence. Again, the tolerance of injury which recorded cases have shown of the brain membranes as well as of the brain substance itself prompts the assurance that much of it is owing to the means adopted of obviating the effects of the violence upon the tissues concerned. The rule of surgery which requires the removal of splintered and loose portions of bone in compound fractures of the skull is as important as that which requires the thorough cleansing of the peritoneal cavity after operations upon the abdomen. The enforcement of these rules is imperative, and their adoption is advantageous, inasmuch as results have shown the importance of their observance; and the principle involved, though similar in each, is one to which surgeons are ever ready to acknowledge their allegiance when cases arise in which its application may seem to be demanded. If, then, surgery has progressed in recent times, some progress at least has been owing to the improvement effected in surgical appliances, to the knowledge obtained of the tolerance of the tissues, and of the means to render them tolerant.

A small aspirator of about half an ounce capacity, furnished with a double cock arrangement, is the most convenient for the performance of paracentesis cranii. The utility of a small aspirator is that it can be easily handled, and the needle when within the cranium well controlled. In addition to which the withdrawal of the fluid is made necessarily very gradual. The child being held on the nurse's lap, with its head facing the light, the surgeon marks a point in the situation of the coronal suture about an inch from the longitudinal sinus, and, holding the needle firmly in his right hand, thrusts it into the cranium, with its point slightly inclined inwards. It is of course necessary to insist upon the perfect working of the apparatus before the operation is commenced, and the plan is a good one first of all thoroughly to cleanse the needle in a carbolic-acid solution. The needle having entered the cranium, the surgeon grasps it close to the scalp between the forefinger and thumb of the left hand, and steadies the head with the right, and the assistant manipulates the piston of the aspirator. The piston should be slowly withdrawn, and pauses of a few seconds now and again allowed to elapse in a manner similar to the application of the ecraseur. The cylinder of the aspirator being full, the cocks are altered and the fluid injected into a clean bottle. Thus the process is continued until no more fluid can be obtained, or until that which flows is seen to be turbid. The positiou of the needle may, from time to time, be altered, according as the tension on the piston of the aspirator shows that the fluid has diminished. After the extraction of about half an ounce of fluid compression of the cranium should be secured. There are several ways of doing this, and one of the best is to use a piece of india-rubber tubing corresponding in diameter to a quarter-inch gas-pipe. Continuous pressure is thus maintained, and it can be altered at will by relaxing or tightening the tube. The use of any form of roller is unserviceable, owing to its liability to slip out of position, and the difficulty which is experienced in controlling the pressure. The tube, around which some lint may be wrapped or sewed, should be made to encircle the cranium twice at a level of the occipital protuberance behind, and the centre of the forehead in front. As the fluid is gradually withdrawn the tube is, from time to time, readjusted and tightened. The operation having been completed, the punctured spot is then covered with a piece of dry lint, and attention directed to the compression of the cranium. This may be maintained by fixing the tube *in situ*, or a capeline bandage of flannel answers the purpose, if carefully applied. It is necessary, during the operation, occasionally to note the effect, if any, upon the child. The condition of the pulse would be the guide as to the judiciousness or not of continuing the operation, and in the event of any pallor supervening, the administration of a little brandy with water after the operation is indicated.

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† A New Method of Trephining the Skull and other Bones. By John B. Roberts, M. D. *Philadelphia Medical Times*, Vol. xii., No. 368, December 31, 1881, page 206.

To sum up—1. Paracentesis cranii is indicated in all cases of acute and chronic hydrocephalus in which, medicinal treatment having failed, the patient is clearly suffering from the increase of the fluid, and life is threatened.

2. It is the only means by which his life can be prolonged, even if, by its performance, the disease is not arrested.

3. All the fluid which can be obtained should be withdrawn.

4. The operation may be required to be repeated should a re-collection of the fluid be followed by a return of the symptoms which rendered its previous performance necessary.

5. The risks associated with the operation are almost *nil*, if carefully performed.

THE TREATMENT OF SYPHILIS IN ITS DIFFERENT STAGES. BY E. L. KEYES, M. D., New York.

I shall approach my conclusions by a consideration of the subject briefly under five heads, as follows:

1. Syphilis in all cases requires treatment by specifics.

2. Syphilis is one and the same for all, modified by constitution, diathesis, and surroundings, varying in its symptoms, according to the soil in which it grows; therefore. as the disease is one, to should the treatment be, modifications in treatment being directed against individual peculiarities.

The individual must be treated as well as the disease.

3. Mild, continued treatment by mercury meets all the general indications of the disease as a whole, and has the extra advantage of being itself tonic.

4. The abortive treatment; there is none yet known the claims of which have been satisfactorily demonstrated.

5. The question of mercury *versus* iodine; of patients who can take neither. The value of the preparations of iodine, and the objection to their use early in syphilis.

1. Syphilis in all cases requires treatment by specifics.

Syphilis is a picturesque disorder, full of surprises. Its symptoms are grouped with a very irregular regularity. They come within sufficiently definite bounds to allow a reasonable classification into stages; but the stages are constantly more or less overlapping each other, and at what time the very last symptom has appeared or is to appear, no honest person can certainly decide or predict.

There is, however, a very distinct tendency to self-limitation on the part of the disease, and to spontaneous cure after the lapse of a certain indefinite period, and this cure may occur without specific treatment, and does occur in severe as well as in mild cases. Syphilis does run itself out in time, and patients become capable of reproducing healthy offspring and incapable of transmitting the disease, thus proving themselves to be well in so far as the persistence of any specific transmissible poison is concerned.

On the other hand, by the uniform testimony of all observers, if there is any specific treatment, any counteracting influence which obviously controls the active manifestations of the poison, that specific and that influence are found best expressed in the various preparations of mercury and of iodine.

It is acknowledged that mercury is more or less a specific against the poison of syphilis. If, then, it can be shown that mercury may be so used as to be a tonic in its action, logic compels the conclusion that mercury should be used in all cases of syphilis, mild and severe; mild. because it cannot harm the patient, while it makes his symptoms lighter; severe, because it moderates the element of severity, and may prevent serious loss of tissue or of function.

2. Syphilis is one and the same for all, modified by constitution, diathesis, and surroundings, varying in its symptoms according to the soil in which it grows; therefore, as the disease is one, so should the treatment be, modifications in treatment being directed towards individual peculiarities. The individual must be treated as well as the disease.

I am aware that some gentlemen in high position have decided against the influence of diathesis as modifying the appearance and course of syphilis. This I cannot understand. In my own observation it certaily is not true.

If, then, my grounds are again tenable, and syphilis is one and the same, except in so far as it is modified by diathesis, habits of life, and surroundings (for dissipation and irregularities of life intensify the number, duration, and severity of the outbreaks, —if this is so, I repeat, then one and the same treatment is applicable to all cases of the disease in which it is well born, countless outside modifications being required to meet peculiarities constitutional, diathetic, depending on habits of life, surroundings and special conditions of body and general health.

3. Mild continued treatment by mercury meets all the general indications of the disease as a whole, and has the extra advantage of being itself tonic.

Since the disease, syphilis, is a continuous malady, with periods of symptomatic outbreak, the specific treatment should be also used continuously in a mild way, with periods of increase to meet the outbreaks.

This is the form of treatment in the main which I have employed systematically for fourteen years, and thus far to my entire satisfaction, and, I believe, to that of my patients. Many of them are married, being in every instance, thus far, the parents of healthy families.

The treatment is the simplest in the world, but requires intelligence on the part of the patient for its success. I invariably explain the whole matter to the patient, and usually inform him that he must consider himself his own physician-in-ordinary, retaining me as a consultant. I put him on some form of mild mercurial in small dose, usually in pill form. Often the form is the centigramme granule of the protiodide of mercury, made by Garnier and Lamoureux. This does not always agree, and then I choose from among the vast number of other preparations of mercury until a suitable one is found. The patient is instructed how—commencing mildly—he is gradually to increase his mercurial dose on every third or fourth day until he perceives the irritative or the toxic effect of the drug. Then, when he has slight diarrhœa or slightly tender gums, he reports, has the dose noted down as a "full dose," to be used when required—perhaps aided by a little opium—and he is instructed to cease all treatment for a couple of days, and then to take up a steady dose of one-half to one-third of the amount which he is capable of digesting.

This one-third or one-half amount, varying according to the patient's constitution and the quality of his symptoms, I have found to be a tonic in nearly all conditions of health or disease. I therefore name it the "tonic dose," and this dose I endeavor to get my patient sufficiently interested in to cause to be willing to take it constantly for a period of from two and a half to three and a half years.

Intelligent patients will do this; those who lack intelligence are not careful about themselves, or lack perseverance, and those who are not convinced of the necessity of so long a course and its harmlessness, will fail. The latter are much more troublesome patients in the end than the class first mentioned.

4. The abortive treatment: There is none yet known, the claims of which have been satisfactorily demonstrated. An individual does not always acquire syphilis when exposed to it. I have known more than one instance where two men have cohabited with the same woman on the same night, and one has become poisoned while the other escaped, a solid skin and cleanliness being evidently the salvation of the latter.

But let an individual once fairly receive the poison into his tissues, and I believe that he is syphilitic, and so remains in spite of any local treatment applied at the point of entrance of the poison.

5. The question of mercury *versus* iodine; of patients who can take neither. The value of the preparations of iodine, and the objection to their use early in syphilis.

My limits of space this evening compel me to omit all consideration of when to begin treatment, when to end it, and the questions of prognosis and of marriage, in so far as they are influenced by treatment. I pass at once to the drugs employed.

Iodine and mercury need alone detain us: sarsaparilla, stillingia, and tajuya are not specific. Mercury is very valuable in softening the duration of chancre, and in those cases where confrontation leaves no question as to the nature of the sore, it may be appropriately employed. A reasonably full dose is better than the tonic dose for this purpose, because a specific action is required.

During the period of second incubation the tonic small dose of mercury is all that is called for, with such hygienic, dietetic, and ordinary tonic means as the individual case requires.

During the whole of the secondary outbreak most cases demand mercury alone—the full dose when the eruption is present, the tonic dose when it is absent.

The intermediary eruptions do better on a mixed treatment—mercury with the iodides while the eruption is out and for a short time afterwards, the tonic mercurial dose alone being necessary during the intervals of eruption, in my opinion.

In the so called tertiary stage—that of profound gummatous lesions of the integument, and interstitial and gummatous changes in the deeper structures—bone, brain, and nerve lesions, etc.—the more purely gummatous the lesion the more iodic does the treatment need to be, and the less mercurial. All interstitial proliferative changes of the internal organs, however, seem to me to demand mercury in considerable quantity when these changes are progressing, in moderate doses when they are fading, and a mixed treatment for a certain period afterwards—the longer as the lesion has been more severe and more difficult to master. After a cure is reached, the iodides may be dropped and mercury alone employed in a tonic dose as formerly for a considerable period to terminate the treatment.

Finally, for those mysterious after attacks, eruptions, ulcers, bone and joint affections, brain and nerve lesions, which come on in some cases long after all symptoms have disappeared and all treatment has been intermitted—these usually require a prolonged mixed treatment with iodides in excess. It is my custom, after such attacks have been overcome, to institute a somewhat prolonged simple mild mercurial course, to avert, if possible, further relapse.

The preparations of iodine, especially the various iodides, are more or less useful in all stages of syphilis, but not so useful as the mercurials, except in cases of gummatous lesion, where they easily take the first rank. This much may be safely said of the iodides, that they are generally quite actively tonic when digested properly, that under their intelligent use appropriate symptoms disappear very promptly, that relapse of symptoms is not so much interfered with by them as by a properly directed mercurial course, that as a rule they influence the earlier symptoms of syphilis much less than the later symptoms.

Another point about the iodides is this: The more destructive and severe the early symptoms of syphilis, the more good do they receive from the iodides. Malignant syphilis, serious throat and mouth ulcerations in early secondary disease, bone and nerve lesions in secondary syphilis, yield more promptly to a mixed treatment with iodides in excess than they do to mercury alone, as a general rule. After such lesions have been subdued by a mixed treatment, I think it is well to return to a simple mercurial course while awaiting further developments. An objection to using iodides early in syphilis, unless there is some special call for their employment, is that by so doing we squander our resources. Some patients grow acclimated, as it were, to the iodides, just as they do to quinine or tobacco. They sometimes become unable to digest it, but more often grow used to it, so that when it is required no ordinary dose suffices, and the patient's stomach suffers, or his skin or his kidneys. The iodides are too valuable to be played with; therefore it is better to trust to mercury, which does the work well, and to hold the iodides mainly in reserve for emergencics and for especially severe symptoms.

Some patients, on the other hand, cannot take mercury into the stomach without experiencing great depression or suffering some physical discomfort. Such patients sometimes tolerate very kindly a little mercury taken through the skin by inunction in the shape of one of the oleates, or, better still, in the form of corrosive sublimate dissolved in alcohol, a quarter to half a grain in the drachm, spread over the surface of the body once a day and allowed to dry in. Many patients cannot digest one form of mercury (the protiodide, for instance) who do perfectly well on some other; blue pill or bichloride. Where the iodides cannot be taken at all, or where severe iodism ensues, an attempt should always be made to educate the stomach up to a capacity for digesting the iodides, so that the latter may be employed in case of need. This I have succeeded in doing in a number of instances by using mild iodides first (especially the iodide of starch), in combination with diuretics (acetate of potash, Bethesda water).

The very excellent method of giving the iodides, to which Seguin has lately called attention, is worthy of extensive trial. I have found it of considerable service. It is simply this: To give the iodide without syrup in a feebly-alkaline solution and upon an empty stomach. The best vehicle seems to be a draught of artificial Vichy water. Many patients will be much less disagreeably affected by the iodides taken in this form than in any other that I have employed.

My time has expired, and I can only refer, by mentioning them, to two very important facts in the treatment of syphilis in any of its stages: They are the serious evils of over-treatment, and the great value of local treatment for isolated lesions. Excess of mercury is bad, very bad. To it is due the bad reputation which mercury has in the eyes of the community at large.

Excess of the iodides is equally bad, if prolonged. It thins the blood, produces purpura, deranges the stomach, and may, (possibly) injure the kidneys. I have known the symptoms of nervous syphilis to be indefinitely prolonged by maintaining high doses of the iodides, and to cease when the treatment was changed.

Moderate treatment should be the aim; moderate treatment used for a long time.

Finally, local treatment is of much use. Rather than run up the treatment from the tonic to the full dose, if there are persistent mouth, throat, palmar or cutaneous or isolated lesions, it is, I believe, much better to continue the moderate dose of the mercurial, and by the local use of stimulating mercurial applications to hasten the disappearance of the lesion which is annoying the patient and keeping his attention concentrated upon his malady.—*Medical Times.*

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ABSTRACTS.

'Qui e nuce nucleum esse vult, frangit nucem."

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HARRIS: PROGRESS OF OBSTETRICAL SURGERY IN 1880. FIVE CESAREAN AND THREE PORRO-CESAREAN OPERATIONS IN UNITED STATES (*Am. Jour. Med. Sciences*, April, 1882).

In five Cesarean sections, the mortality was sixty per cent. women and eighty per cent children. During same year, there were eleven Porros in Italy, with four successes; five in Germany, with two; three in Austria, all successful; and one in France out of two. The number of assistants required by the Porro method limits its application in districts with scanty population; whence the importance of making the pure Cesarean section as safe as possible in this country. As a means to this end the operation should be made one of anticipation and choice. Recovery would seem to more certainly follow where the spray is used. Virgin silver wire and pure silk form the best sutures, and from six to ten interrupted sutures should be used. Where the abdominal cavity is carefully cleansed and the uterus well closed, drainage is not needed. During the past ten years, there have been recorded fifteen cases, with nine deaths. All these were pure Cesarean. In most of these cases, however, the operation was one of necessity, not of election. The following are the case of pure Cesarean section in this country during 1880.

CESAREAN CASE 119, Toledo, Ohio, May 22d, 1880; operator, Dr. S. S. Lungren.—Woman, 34, rachitic, operated upon in a previous labor five years before (May 8th, 1875). In labor only three hours; Fallopian tubes ligated; uterine wound sutured with silver wire; woman alive and well in February, 1881, when she was said to menstruate without pain. There are now two rows of silver sutures in her uterus. An abdominal drainage-tube was used in this case for three days.

CASE 120.—Whitefield, Coos County, New Hampshire, June 16th, 1880; operator, Dr. George S. Gove. Woman, 34, rachitic, four feet high, and eighty-two pounds in weight; superior strait reniform; conjugate diameter, two inches, in labor thirty-two hours; was exhausted, restless, and feverish at the time of the operation; died in sixteen hours from nervous shock and prostration from vomiting. The child was saved. No uterine sutures were used (case not yet published).

Case 121.—New Prospect, Choctaw County, Mississippi, June 30th, 1880; operator, Dr. A. S. Kirk, of Louisville, Miss. Woman, black; 26; no deformity; in labor with her third child; a day before, Dr. G. L. Terrell was called in to replace a midwife in charge; found right arm protruding, and the fetus impacted in the pelvis; woman at the time of operation exhausted and sinking; labor pains had ceased; operation performed thirty hours after commencement of labor; child found dead; uterine wound not sutured; abdominal wound dressed with dilute carbolic acid. Woman recovered, and was up and at work in her house in a month. On July 16th, 1881, she bore another child naturally.

Case 122.—Near Stockwell, Tippecanoe County, Indiana, November 6th, 1880; operator, Dr. Moses Baker. Woman, white; 34; wife of a farmer; 150 to 160 pounds in weight; large immovable fibroid in the pelvis, and a second tumor, the size of a fetal head, attached to the fundus uteri; slight pains for sixty hours, and the membranes ruptured three days; state of patient good; pulse 80; very hopeful of recovery; phlegmasia dolens appeared in the calf of left leg on the eighth day, and whole extremity swollen by the twelfth day; up and out of bed in thirty days; child lived. Operator's hands, instruments, ligatures, sponges, and cloth, all carbolized. *Uterus sutured with four stitches of carbolized silk.*

Case 123.—Prescott, Arizona, December 7th, 1880; operator, Dr. F. K. Ainsworth. Woman, 35; an Indian squaw of four feet ten inches, with conjugate of 1¾ and transverse of 2⅞; had been in labor without attention for four days, and was much exhausted; operation under carbolic spray; all instruments carbolized; Lister dressing; placenta under line of incision; hæmorrhage profuse; abdomen cleansed of blood; *uterine wound closed with four silver wire stitches.* Peritonitis set in at the end of the third day, and caused her death. Child saved.

The uterus was sutured in 3 out of the 5 cases, with a saving of 2; Listerism was used in 2; phlegmasia dolens occurred in 1 case.

Of the American Porro's, one mother was saved and two children, the other child being a six months fetus. The value of this method is not yet determined. As a hospital operation, it is less fatal than the old method.

E. H. Grandin.

Aneurism of the Brachial Artery.—Dr. Emmett Holt, late House-Surgeon to Bellevue Hospital, New York, records a case of idiopathic aneurism of the brachial artery in the current number of the *American Journal of the Medical Sciences*, and at the same time gives a careful *resumé* of the literature of the subject. He has excluded from his consideration all cases of traumatic aneurism, and he has been able to find only thirteen cases of brachial aneurism, not directly due to injury, three of which have been recorded in America. The main facts to be adduced from this series of cases are these. Only two cases occurred in females; eight occurred in patients under thirty-two years of age, the oldest patient was sixty, the youngest seventeen. In six cases the aneurism was at the lower end of the artery, in two it was situated at the lower third, in two at the middle third, in one at the junction of the upper and middle thirds, and in three in the upper third. In several cases there was a history of previous strain or strong muscular effort. Twelve cases were cured, one left the hospital unimproved, and one case (Scarpa's) was left to die untreated. Eight of the successful cases were ligatured; four times the thread was placed pretty close to the sac, and in two of them there was secondary hæmorrhage; the Hunterian operation was done twice, and in one case the old operation of incision of the sac and double ligature of the artery was successfully performed. Compression was tried in nine cases and succeeded in four. In two cases the aneurism was cured without obliteration of the artery. The treatment that was successful in Dr. Holt's case was compression by means of a triangular piece of splint board, the apex being padded to form a ball three quarters of an inch in diameter. The man lying in bed, his arm was drawn away at right angles from the body and supported by a table, and the surgeon, seated in front of him, placed the small end of the pad on the artery and rested the broad end against his shoulder, by which compression was easily kept up. Dr. Holt states that by this means he was enabled to control the artery without painful compression of the nerves.

AIR EMBOLISM.—Dr. Draper (*Boston Med. Jour.*, Jan. 12), summarizes our knowledge on this subject thus:

Admission of air into veins is a very serious accident. The effect of air so admitted varies according to the amount; if large, and its introduction rapid, death immediately follows; if small, or the introduction be slow, only a temporary circulatory disturbance, as shown by the fainting and distress, may result. The amount of air and its manner of introduction may be determined by a post mortem examination, providing such examination be made soon after death, before decomposition has developed gases. If death follows rapidly after the introduction of air, the right side of the heart would be fully inflated with air, with comparatively few bloody bubbles; if the fatal result were slower the right cavities would still be expanded, but the contents might consist almost wholly of bloody bubbles, from the churning action of the heart. Instant death has resulted from entrance of air through the uterine sinuses in delivery at term and in instrumentally induced abortion. The anatomical structure of the uterus is such that under favoring circumstances air can enter rapidly and in large quantities into the uterine sinuses, and so make its way to the heart. Such favoring circumstances are: An open cervical canal; a separation of the fœtal membranes, exposing orifices of uterine sinuses; unusually large sinuses; imperfect plugging of sinuses by clots; the structure of the canals themselves, being intimately adherent to the wall of the uterus so that they remain open when divided.

Dr. Draper then explained the way in which death is brought about in such cases. When the external air has free entrance to the cavity of the uterus, either through a tube like a catheter, or being forced with a syringe, or by admission through the natural passages, and when the orifices of the uterine sinuses are open, then the uterus, alternately contracting and expanding under any stimulus (a foreign body like the air itself), will act like a rubber bulb to suck into its cavity and into its sinuses this external air, while the heart and lungs meanwhile act also as a suction force to draw air through the veins leading from the uterus to the heart; its rapid accumulation in the right side of the heart distends these cavities instantly, so that the heart's muscle becomes paralyzed and unable to contract. Whatever blood mingled with air the heart can propel goes to the lungs, and from the bubbles of air lodging in the capillaries the pulmonary circulation is seriously interfered with. A convulsion with this form of death is the rule. Death may result instantly, where the amount of air is large, by paralysis of the heart and asphyxia, or it may result from the consecutive effects of the air, as a pneumonia; this in cases where only a smaller quantity enters the circulation.

VESICAL CALCULI WITH NUCLEI OF BONE.—In the *American Journal of the Medical Sciences*, for Oct. 1881, Dr. J. M.

Bannister, Assistant Surgeon U. S. A., reported the successful removal of a calculus and necrosed bone by the operation of lateral lithotomy from the bladder of an Indian scout, nineteen months after the reception of a gunshot wound. In the January number for 1882 of the same Journal, Dr. Bannister describes the exceedingly interesting pathological specimens removed from the bladder after the death of the patient.

The calculi discovered in the vesical cavity proved of the greatest pathological interest. The larger of the two, evidently, from its shape and size, the one left encysted at the lithotomy in 1880, was ovoidal in shape and weighed 244 grains Troy; its surface was thickly coated with crystals of ammonio-magnesian phosphate. Upon sawing through this calculus, there was found a well-marked splinter of bone playing the part of a nucleus, while the mass of the stone was composed of phosphatic matter arranged in concentric layers. The smaller body, more irregular in shape, was also coated with crystals of ammonio-magnesian phosphate, and weighed 77½ grains Troy. Its mass was found to consist chiefly of necrosed bone, around which was its phosphatic envelope. It is probable that the nucleus of the larger stone had the following origin. The wounded anterior wall of the bladder having, in consequence of the inflammatory process, become adherent to the injured pubic bone, a splinter, chipped or possibly exfoliated from the bone in question, remained in the wound and served as a nucleus for the phosphatic deposit. This stone had evidently been liberated from its sac by the ulcerative process, and had dropped into the bladder fundus some months before the patient's death.

In the case of the smaller formation, the origin of the nucleus cannot be so definitely traced. It could not possibly have remained in the cavity of the bladder at the conclusion of the lithotomy a year before, as every precaution was then taken to avoid such an oversight, and at the time of the patient's departure from the hospital he was suffering from no symptoms referable to such a cause. It is very probable, therefore, that, like the bone fragments removed at the lithotomy, it made its way into the bladder by ulcerative absorption, having in the first instance been splintered from the sacrum and driven by the force of the ball into the bladder-wall: that it was not a recent exfoliation was proved by the absence of signs of present necrosis affecting the pelvic bones, as discovered at the autopsy, and by the non-existence of fistulous tracks.

This case is the fourth instance of calculous formation about bone fragments in cases of gunshot wound of the bladder reported in the United States; while only sixteen cases are on record in the surgical histories of all countries.

SIMULTANEOUS LIGATION OF THE CAROTID AND SUBCLAVIAN ARTERIES FOR ANEURISM OF THE INNOMINATE.—In the *American Journal of the Medical Sciences* for July, 1880, Dr. Lewis A. Stimson, of New York, published the account of an operation performed for the relief of a patient affected with an aneurism of the innominate artery. The operation consisted in the simultaneous ligation of the common carotid and of the subclavian in its third portion, and was followed by the gradual subsidence of the tumor and the relief of the symptoms. It remained afterward unchanged up to the time of the patient's death from phthisis, twenty-one months after the operation, and Dr. Stimson now completes the history of his case by publishing in the January number for 1882 the account of the post mortem appearances.

The aneurism arose from the anterior and right half of the innominate artery, involving nearly its entire length; it began just above the origin and extended nearly to the spur of the bifurcation. There was a second small shallow aneurism in the tracheal side of the innominate about an inch in diameter, and half an inch in height; this also was filled by a firm clot. The clots of these two pouches were in contact with each other by their bases. They were laminated in structure, closely adherent to the wall of the sac, and covered on their free surface by a membrane that was structurally continuous with the wall of the artery, so that the blood could not make its way at any point between the clot and the wall of the sac. The aneurism, or the artery, was pervious to the extent that blood could probably pass in a small stream between the contiguous bases of the two clots. The carotid artery was completely occluded from its origin to its bifurcation by a pale adherent clot, which was also overgrown by a membrane at the origin of the vessel and at the bifurcation. The place where the ligature (catgut) had been applied, one inch below the bifurcation, could be recognized by the touch as a transverse sulcus when the vessel was rolled between the fingers. There was no change at this point in the size of the artery. There was communication between the external and internal carotids at the bifurcation. The subclavian artery was pervious in its first and second portions ; its branches not recognizably dilated. It was entirely obliterated for a distance of half an inch in its third portion, its lumen was of full size on each side, the obliteration ending abruptly in a smooth rounded pouch. Apparently the artery had been completely divided by the ligature and its ends had separated by retraction. There was no clot on either side of the occluded part. The common carotid was permanently occluded at the bifurcation by a white glistening membrane uniform in appearance and continuous with the inner coat of the artery.

Dr. H. Lindner : Treatment of Recent Empyema in Children.—(*Jahrbch. f. Kindhlkde.*, XVII. B., 3 H.)—At the present time, the position of the profession, and especially the surgical portion, is quite in favor of operative proceedings in the treatment of old empyema and empyema in adults. Most authors have, however, opposed this treatment in the case of recent empyema in children, and the author proposes to show that their position is a false one.

His material for observation has been quite large, but he only details one case in full, that of a child only seven months old, in which he very successfully opened the thorax. This, he claims, is the youngest patient on whom the radical operation has been done, but the good results obtained in it are not only not rare, but rather the rule. Yet practitioners constantly urge that puncture is the only safe method to be used. The disadvantages urged against the radical operation are, the greater danger of the proceeding, greater mortality, longer duration of treatment and greater minuteness necessary, while the puncture is described as a perfectly harmless proceeding, easy to perform, and leading rapidly to cure.

The author proceeds to answer these points *seriatim*. There are no statistics to show, he claims, which of the two procedures is more dangerous. From his own experience and the cases he has been able to collect, he finds that the mortality after the antiseptic performance of the radical operation is extremely small. Authors who claim the contrary have certainly not gained their knowledge from a "modern antiseptically operating surgeon."

König considers the incision, when antiseptically performed, "a sure and safe operation, rapidly leading to perfect cure." Thoracaocentesis, the author claims, on the other hand, is not the simple, safe, and easy procedure which many authors have described it. When carefully carried out with antiseptic precautions, it is indeed a slight thing ; but there are few surgeons who cannot show cases in which they have been called upon for the radical operation after the purulent exudation had been degenerated and rendered fetid by a preceding puncture performed by the physician. This degeneration, of course, makes the prognosis less favorable, for, though the lives of such patients can generally be saved, the cure is a much longer one. Two openings are often necessary, and frequent washings.

In regard to the second objection made

to the radical incision, that cure is longer, statistics also fail.

Konig, from his large experience, computes the average time of cure in an uncomplicated empyema operated on by incision at from three to six weeks.

The author's experience coincides with this, and as no further figures can be found, he considers it fair to accept this as correct. He gives various statistics to show the average duration of cure by puncture, and this he finds to be little longer than by incision. He omits in this calculation those cases which are rapidly cured by only one aspiration. On account of such cases he formulates the following rule:

"Every recent empyema should be once punctured (aspirated), and, if not cured by this, at once incised under strict antiseptic precautions."

Konig agrees with him in this, except that he limits it to children not too much debilitated. The author would apply it in all cases.

He then discusses the comparative simplicity of the two treatments; claims that the change of the antiseptic dressing is less trouble than the daily examination of the lungs to see when to puncture again; that after a few days, the dressing may, in older children, be left on six to eight days, and there is no repetition of the operation. In changing his dressing, he does not use the antiseptic spray, etc., but quickly slides one dressing out from under the other. The amount of exudation is much less in treatment by incision, the tax on the patient's strength much less.

In regard to the entrance of air in the incision, the failure of the lung to expand, the sinking in of the ribs, and the methods of preventing these, the author claims that these dangers are more theoretical than practical, and he takes no particular precautions against them. Another advantage of incision is that the clumps of fibrin which cling to the pleura, and which, remaining after puncture, may undergo cheesy degeneration, may be removed through the wound.

Discussing the performance of the radical operation or incision, the author does not think it necessary in children to remove a portion of the rib. The point of incision is also not a matter of great moment. In small children, it may even be well formed, to prevent soiling from the urine and feces. The children can be frequently turned, so that drainage is free. The double incision is only necessary when the pus is putrid, and frequent washings have to be made. Small children may be held quiet enough without an anæsthetic; larger children should be chloroformed. The matter must be allowed to discharge slowly. The opening can be controlled with a sponge or the finger, both carefully disinfected. Contrary to the advice of some, the author uses light rubber bandages in fastening on his dressings. He formerly used the regular, carbolized antiseptic gauze, but now, fearing carbolic intoxication, he uses a gauze prepared with acetate of alumina. This he finds preferable on all accounts.

In closing, he mentions cases in which the pus breaks through into the lungs, and believes that in these we must wait to see what nature will do before we operate; but not delay to cut when fever, difficult respiration, etc., increase to an alarming extent.

E. INGERSLEV (Copenhagen): ON PLACENTA PRÆVIA (HOSPITALS-TIDENDE, Nos. 47–52, 1881.—This excellent article, going through six numbers of said journal contains partly a review of the different doctrines proposed on this deplorable complication of child-birth, partly new, or at least, corroborative facts gained from an examination of thirty-one cases occurring in the Maternity Hospital of Copenhagen from 1861 to 1880, twenty-two cases which were treated during the years 1859 to 1880 polyclinically by the physicians attached to the hospital, and eight personal observations.

The author points out that the new theory, according to which placenta prævia is due to pathological uterine contractions, and is to be considered as an arrested abortion, was first propounded by the Swedish author, Dr. Sirelius (*Akadem. Afh.*, Helsingfors, 1861) many years before L. Muller's monograph (Placenta Prævia, Stuttgart, 1877.)

Often the placenta prævia,in consequence of being inserted in a place where the decidua is less fit for its nutrition, presents abnormalities both in configuration and structure. It is sometimes very much spread out, and thin. Only the central portion near the insertion of the cord forms a thick, compact mass, the remainder presents the appearance of a membrane with isolated groups of villi forming knotty protuberances on the surface of the chorion. By the uneven development of villi, the placenta may get an irregular lobular shape, or placentæ *succenturiatæ* are formed or the placenta has the configuration of a horseshoe, or of a ring. Sirelius shows how on the atrophic membranous parts of the placenta the villi have undergone a retrogressive metamorphosis. Instead of being covered by decidual tissue, they are surrounded by shapeless connective tissue. The underlying thin flattened placental tissue is distinguished by short ovoid villi with a defective arborization. The substance of these villi is more or less filled with fine granules and fat-drops, which partially or entirely conceal the nuclei characteristic of the villi, while the chief trunk is changed to fibrous connective tissue without vessels.

The old doctrine that the bleeding accompanying placenta prævia is due to a gradual detatchment of the placenta, does not seem to hold good. If the hæmorrhage were due to the gradual development of the lower uterine segment it ought to occur quite regularly in the latter months of pregnancy, but that is not the case. In forty-seven cases examined by the author, there were twenty-one in which pregnancy went on till full term, and among these twenty-one cases there were five in which no hæmorrhage occurred before the labor pains began. In twenty-seven other cases, pregnancy was interrupted before the time, and among them there were eleven cases in which no hæmorrhage occurred before labor. Thus fully one-third of all the cases, sixteen out of forty-seven, only presented hæmorrhage immediately before or immediately after labor pains set in.

The different insertion of the placenta has some influence in this respect. Thus it may be stated, in general, that hæmorrhage occurs oftener with successive repetitions before labor-pains in cases of total placenta prævia than in such of partial placenta prævia. Thus the author found that

BLEEDING BEGIN IN	PARTIAL PL. PR.	TOTAL PL. PR.
28th to 32d week...	1	2
32d to 36th week...	5	4
36th to 4th week...	9	10
Shortly before or together with labor pains at or before term............	16	6
Total..............	30	22

which shows that in more than two-thirds of the cases of total placenta prævia the hæmorrhage occurring at delivery had had precursors. But the connection between the site of the placenta and the time of the occurrence of the hemorrhage is not an absolute one. We may find cases of total placenta prævia going on without any hæmorrhage till labor sets in, and on the other hand, cases of partial placenta prævia in which hæmorrhage occurs months before delivery, and is repeated with great severity.

Circumstances which particularly favor the development of the "lower uterine segment," such as first confinement and vertex presentation, do not bring about early or repeated hæmorrhages. In fourteen primiparæ with placenta prævia, the first bleeding occurred eight times immediately before or after the beginning of labor, which in five cases was timely, in three premature. Of two cases of total placenta prævia in primiparæ, labor began in one six or eight weeks before term, after a hæmorrhage going on steadily for two days, which had been preceded three weeks earlier by a trifling one. In the second, labor occurred at about term; there had been no hæmorrhage during pregnancy, but one lasting thirty-six hours took place before and together with labor-pains.

It results from these facts, that the *hæmorrhage in placenta prœvia in a high degree has a somewhat accidental character.* When the placenta, instead of being succulent and yielding, loses its elasticity, we can understand that it cannot follow the development of the "lower uterine segment," and that even a trifling disproportion between the placenta and the placental site may suffice to cause a detachment with consequent hæmorrhage.

Hemorrhage after delivery is particularly dangerous, but fortunately of rare occurrence. It is sometimes due to atony of the placental site, which, being situated on the "lower uterine segment," does not contract with the same ease as the upper thick part of the uterus. In other cases, it is due to lacerations of the cervix, which are easily produced by early interference while the os is yet small, so much more so as the tissue of the cervix in these cases is often very friable.

As to treatment, the author recommends the use of the tampon. In the question as to the advisability of rupturing the membranes early, he sides with Spiegelberg and others, who do not have recourse to this measure unless the pains be strong, the pelvis not contracted, the vertex or breech presenting, and, above all, the os sufficiently dilated that, in case the hæmorrhage is not checked, or other untoward accidents happen, delivery may be effectuated by means of version or the forceps. In the cases at the author's command, the os was usually one and one-half inches in diameter when version was resorted to.—*Obstet. Jour.*

H. J. GARRIGUES.

GUSTAV BRAUN: THE TREATMENT OF VESICO-UTERO-VAGINAL FISTULÆ DURING THE PUERPERAL STATE (*Wein. Med. Wocheschr.*, 1881, No. 53).—According to Verneuil, Nelaton, and Sims, the sixth or seventh month after the confinement during which the injury occurred, is the proper time to operate on vesico-vaginal fistulæ. Baker Brown, Kiwisch, and Bozeman operate a few weeks after delivery. Braum maintains that the operation ought to be performed immediately after the accident, and reports one case in support of his opinion.

Dec. 15th, '80. G. M. æt., 28, was admitted, had two children previcusly. Membranes broke nineteen hours before admission. Examination shows the right shoulder presenting with prolapse of pulseless funis. Version was impossible, and decapitation with Braun 's blunt hook decided upon. It was attempted by a student, who omitted to follow the instructions given him to rotate the instrument simultaneously while making traction, and to control the end of the hook with his thumb, but simply pulled in a downward direction, so that the hook tore through the anterior wall of the vagina, and the posterior wall of the bladder, and by continuing to rotate, these parts were freely lacerated with a considerable loss of substance. As soon as Braun noticed the slipping of the hook, he interfered, and finished the operation in the usual manner. Examination revealed a laceration involving the cervix, the vagina, and the bladder, extending transversely about 7 cm. (2¾ in.), vertically about 5 cm. (2 in.). The uterus was irrigated with a 2 per. cent. solution of carbolic acid, ergot given hypodermically, and the bladder and vagina thoroughly disinfected. Several portions of lacerated tissue were removed with the scissors, whereupon the edges could be tolerably accurately adapted, and were then united by twenty silk sutures. A self-retaining catheter was left in the bladder, and the vulva covered by a salicylic cotton dressing, which was renewed every four hours. On the 18th, shreds of necrotic tissue were discharged with the lochia, and urine was passed through the wound, and the catheter was, therefore, removed. On the following day, a small quantity of urine came through the urethra. On the 21st, the sutures were removed. The wound had only partly united, leaving a vesico-cervical fistula about ½ inch long. The edges of this were cauterized on alternate days with argent. nitr. until January 5th, when cautery with Paquelin was resorted to. Beginning at a distance from the wound, the red-hot point was carried around it in large circles, and the edges only very lightly touched. No reaction took place, and the fistula contracted to the size of a probe in a few days, and was entirely closed on March 10th.

On November 14th, she was again admitted in labor at seven months. Transverse presentation, anterior wall of cervix cicatricial, rigid. She was placed on her right side, but the pains did not return until the following day, when, owing to premature detachment of the placenta, a slight hæmorrhage occurred. The right foot was then brought down, and three hours later she was delivered of a dead child. The resistance of the cicatrix in the anterior wall of the cervix retarded the passage of the head considerably, and compressed it with such force as to render its shape almost cylindrical. Before discharging her she was examined, but all that could be seen was a cicatricial depression occupying the centre of the anterior lip, and running upward about one-half inch.—*Obstet. Jour.*

Persistent Hymen.—So much has been made of the presence of the hymen as a proof of virginity, that the following case, coming from so high an authority as Dr. Thomas, who presented it to the New York Obstetrical Society (New York *Medical Journal and Obstetrical Review*, May, 1882) will possess much interest in a medico-legal aspect:—

A German lady, belonging to the upper walks of life, had been married eight years, but had never become pregnant. Being dissatisfied, she consulted him with regard to the cause of her sterility. In reply to his questions she said her menses were perfectly normal, she had very little leucorrhœa, and the only symptom of which she complained was a good deal of backache. A vaginal examination was proposed, and on attempting to introduce his finger Dr. Thomas found it impossible to do so, on account of the presence of an unruptured hymen. The hymen was perforated by an opening only barely large enough to admit a common sized lead pencil. The woman, however, again affirmed that she had been married eight years, and said that her husband had had intercourse with her regularly, at least once or twice a week, and that there had been nothing abnormal about it whatever. When he explained to her the conditions of things she laughed and said it was impossible; she could not still be a virgin. Her husband, whom she was requested to send to the speaker's office the next morning, came, and he also laughed when informed that his wife was a virgin, and told Dr. Thomas, in a pleasant sort of way, that he was a *farceur*. He was about thirty-eight years old, of good figure, and said that his sexual vigor was perfect; before his marriage he had been something of a man of the world, and knew very well what it was to have intercourse with women; he had been married eight years, had had intercourse with his wife regularly, and in a perfectly normal way. Having now placed himself in such relations to the man that he would have to prove his position, Dr. Thomas requested him to bring his wife to his office the next day, which he did. Placing the woman in position, Dr. Thomas separated the labia, and showed to her husband the exact state of things. He was amazed, and could only reiterate that intercourse had been regular during the eight years of their married life. It was proposed to remove the hymen and put in a glass plug; but the husband desired him to wait a week, for he thought that in the meantime he could make all right. At the end of the week, however, the man returned, and said he now recognized that he had never had intercourse with his wife in the proper way, but how he had been deceived during these eight years he could not possibly understand. The woman was afterwards etherized, the hymen was removed, and a glass plug was introduced. Her husband said that now everything was changed, greatly for the better.

MEDICAL SOCIETIES.

"Vitæ Post Scenia Dicunt."—LUCRETIUS.

NEW YORK PATHOLOGICAL SOCIETY, regular meeting.

DR. E. C. SEGUIN, President, in the chair.

DR. HEINEMAN presented a specimen of thrombi of the uterine sinuses and of the right ovarian vein. It was removed from a woman who two weeks before her death had been confined, and afterwards did rather poorly, but no particular symptoms being manifest until the third day, when she became delirious, and the temperature rose from 100.5° to 105.25°. There were no other marked symptoms at the autopsy, there was no laceration of the cervix. The uterus was of usual size two weeks after delivery, the sinuses were occupied by thrombi, as was also the vein of the right ovary, extending up to, but not into the vena cava. There was also what appeared to be a fibrinous deposit upon the lining membrane of the uterus.

DR. HEINEMAN also presented specimens illustrating necrosis of the heads of the fifth and sixth ribs and of the laminæ of their articulating vertebræ.

The patient had sustained a severe muscular strain five years before, after which a tumor developed in the right axilla, which was opened and the abscess washed with carbolic acid solution. Four months ago he entered the hospital with a tumor at the lower angle of the right scapula, which was opened as soon as fluctuation was detected. The patient did badly, the temperature rose, there were symptoms of hectic; there was dullness on the right side of the chest. At the autopsy empyema of the right pleural cavity was found. Opposite the head of the fourth rib an opening communicated between the pleural cavity and an abscess behind the spinal column. Opposite the head of the fifth rib was an abscess the size of a pigeon's egg, not yet opened, but which doubtless would have opened into the pleural cavity had not death taken place so soon, as stated. The heads of the fourth and fifth ribs were necrosed, as were also the laminæ of their articulating vertebræ. The condition was doubtless due to the injury sustained five years before.

DR. WYETH had presented a similar specimen at the last meeting, but the patient was still living, and the exact pathological condition could not therefore be determined.

Cystoma of the ovary; ovarian papilloma. These specimens were presented by Dr. Nathan Bozeman, and were removed today from an unmarried woman thirty years of age, who had an ovarian tumor which became apparent four years ago, but was not correctly diagnosed until later. The adhesions to the omentum were found to be considerable. The larger cyst, of the left ovary, contained smaller ones, and at its lower portion when inverted presented a beautiful specimen of cauliflower-like excrescences of a papillomatous nature. A fullness in the posterior *cul-de-sac* was found to be due to a small sized multilocular cyst of the right ovary. It served well to illustrate a certain class of cases in which, after tapping, the tumor entirely collapsed, but later tappings failed to cause complete collapse of the tumor, a fact to be accounted for by the gradual growth of the smaller cysts, which yet remained unemptied after later tappings of the larger one. The operation was undertaken before, but ether was taken badly, and it was postponed. There was albumen in the urine, and her family physician thought he detected casts.

DR. HOWE thought the patient would die if there were truly renal disease, for he had never known a case of recovery after a capital operation upon a patient suffering from this affection,

DR. L. H. SAYRE remarked that some years ago his father exsected the hip-joint of a boy upon whom another surgeon had refused to operate because of Bright's disease. The boy recovered from the operation but died nine months afterwards of acute nephritis.

DR. GIBNEY remarked that there were cases on record of recovery from amputation at the hip or thigh, the patient having amyloid kidney and liver. Such a case he had observed in the Presbyterian hospital. The liver was greatly enlarged from the amyloid degeneration, and the kidneys were also affected.

Dr. Howe remarked that possibly in that case the removal of the cause of the amyloid degeneration, viz: bone disease, resulted in a cure of the visceral affection; if so, it was an exception to the rule, that patients with Bright's disease die after capital operations.

Dr. Rudolph Tauszky remarked that if there were amyloid degeneration of the liver and kidney the patient would almost certainly die within a year or two of uræmic symptoms. Many cases, doubtless, were diagnosed as renal disease from supposed casts in the urine, when in fact the microscopist had mistaken pieces of linen or other material for true renal casts. In certain cases, however, as after scarlatina, albumen and casts might appear in the urine, indicating disease of perhaps only a part of the kidney, which could be recovered from.

Dr. Kinnicutt presented a specimen of multiple cerebro-spinal sclerosis, which was removed from a patient who died in his service at St. Luke's hospital yesterday. She was thirty years of age, and was perfectly well until two years ago, when she began to have convulsions resembling epileptic convulsions. Six months ago there was twitching of the right lower extremity, which soon extended to the right arm, and she was wholly incapacitated for work or walking. On admission she was well nourished, complexion good, no œdema, complained of no pain, no disturbance of sensation. Her memory was so deficient that no history could be obtained from the patient herself. Her urine dribbled away continually, on account of overflow. The catheter gave relief. The bowels passed involuntarily. There were marked ataxic movements of the extremities. No loss of power, but marked loss of co-ordinating power, marked tremor upon voluntary motion, especially the right extremities. Does not pertain to the head, nor at all during rest. Slow jerking manner of talking, as in "scanning." Tendon reflexes normal. Marked mental weakness, pupils react well, the right one more readily than the left. The patient gradually sank and died. The diagnosis of multiple cerebro-spinal sclerosis was verified at the autopsy.

The President remarked that it was uncommon to have opportunity to verify the diagnosis of multiple cerebro-spinal sclerosis by an autopsy, although diagnosis of this affection was not very infrequent during life. The presence, and often the exaggerated condition of the reflexes in this affection was an important diagnostic symptom as distinguishing it from locomotor ataxia.

Dr. L. H. Sayre presented a specimen of bone removed from the fore arm after a gunshot wound. He also presented a specimen of cicatricial tissue from a burn. This was removed from the abdomen of a boy who sustained a burn of two-thirds of the anterior surface of the left thigh and of the whole of the abdomen, resulting from the ignition of phosphorus in the pocket. The thigh was flexed on the abdomen, and abducted. It was straightened after the operation, and was in a fair way to heal with good results. The extent of the cicatricial tissue prevented a plastic operation.

Larynx, Trachea and lungs illustrating membranous croup. This specimen was presented by Dr. Rudolph Tauszky, and was removed from a child who died at two years of age of croup, extending down the bronchi to the second division. He presented it as showing the distinction between the exudative deposit of this affection and that of diphtheria. In the former the membrane being easily wiped off, and leaving no ulcerated surface; whereas in diphtheria the removal of the false deposit left a raw, ulcerated mucous membrane beneath. Again, the two diseases were also distinguished by the clinical history; in diphtheria the pulse was weak even from the beginning. The glands of the neck were more or less swollen, the temperature was higher. It was very important to make these distinctions when we came to the treatment, for in croup emetics might be used to cast off the loosely attached false membrane, whereas in diphtheria they would have no such effect, and a stimulating plan of treatment should be carried out; disinfectants were necessary here also, such as carbolic or salicylic acid, which were unnecessary in croup. Although a distinction between the two affections was now quite commonly recognized, there were yet many high authorities who claimed that they were one.

Dr. Van Santvoord remarked that he had attended a case of diphtheria this winter in which the pulse did not rise above 80 or 90 until after five days. The membrane after death was difficult to detach from the larynx, but less difficult of removal lower down.

Dr. G. A. Peters remarked that he had attended a number of cases of diphtheria in which the glands of the neck were not at all enlarged, though in many other cases they were very considerably swollen.

Dr. Wyeth presented a specimen of aneurism of the ascending portion of the arch of the aorta, for which about a year ago he had ligated the carotid artery. The tumor thereupon decreased in size so that it was no longer visible above the surface of the chest, and pain was relieved, in what manner he was unable to say. She died within a year of an intercurrent disease, and his diagnosis of aneurism at the junction of the ascending and transverse segments of the arch was verified at the autopsy. There were but few such cases on record.

Dr. Birdsall presented a specimen of round celled sarcomatous tumors of the brain, the history of which had previously been related at the Academy of Medicine.

The President remarked that a few years ago it was commonly believed that tumors of the brain always caused choked disc, but he had seen several cases in which the ophthalmoscope failed to give corroborative evidence of the brain lesion.

The society adjourned.

New York Academy of Medicine.—Stated Meeting, Dr. Fordyce Barker, President, in the chair.

Dr. A. B. Judson read a paper on

SOME PRACTICAL INFERENCES FROM THE PATHOLOGY OF HIP-DISEASES.

The effect, he said, of the application of traction to a joint in a state of acute inflammation is eminently gratifying. All have experienced pleasure in seeing a patient relieved from his suffering by the simple expedient of the weight and pulley. This method of treatment in cases of hip disease had been commonly practiced. To this effect he quoted the statistics of the New York Hospital for the Ruptured and Crippled, at which institution, from 1863 to 1873, over one-half the patients suffering from this affection were so treated, and he believed the method was quite commonly adopted by specialists in this line throughout the city, as well as elsewhere. Dr. Judson then took up the subject of the *rationale* of the treatment, having already recognized the relief from pain which it produces. It was generally supposed that by pressure upon the acetabulum, due to contraction of the muscles concerned in the hip-joint, pain was excited, and that by counteracting such muscular contraction by the weight and pulley, or other apparatus, such pressure was relieved along with the sufferings of the patient which it gave rise to. Hunter, and several other of the older authorities, were quoted as having appreciated in some degree the influence exerted by muscular contraction, but it was not until of late years that full recognition was given to the importance of this pathological factor. The therapeutic precept which implied the overcoming of muscular action it seemed to him deserved closer investigation than it had yet received. Various authors were then quoted with reference to "the vicious circle." The influence which inflammation within the joint had to do in causing reflex contraction in the muscles, and the aggravating effect of this latter upon the inflammatory process by pressure which it produced.

The morbid anatomy of the affection was

reviewed, and illustrated by drawings copied from Drs. Sayre, Gibney, Barwell, and others. Not a few cases were on record in which the ulcerative process affected the bone alone, the articulating surfaces escaping entirely. This fact threw doubt upon the opinion expressed by some, that muscular contraction was the originating factor of the affection, or at least one of the leading factors. Specimens in which the ulcerative process affected the articulating surfaces alone, the bone escaping, were not found, by which to support the view that the disease in its incipiency existed in the articulating surfaces or soft parts of the joint, and was caused by muscular contraction. The central portion of the bone was usually more deeply implicated than the bony or hard substance, which would go to show that the disease had its origin in the cancellous portion, and from there radiated outward. The ulcerative process in some cases was so great that if the muscular contraction were as powerful as we should infer it to be from the amount of weight recommended by some to overcome it, the diseased bone would be crushed and become greatly shortened.

In reviewing the subject, it would be seen that he had not found, in the morbid anatomy, facts to support the view that in its incipiency the disease could have been due to the muscular contraction causing pressure, but it could not be said that later this did not exert an influence in shortening the limb, and inasmuch as when it was overcome the patient experienced relief from pain, there was good reason for adopting the counter-extension in the treatment; but there were also ample rational grounds for its use; it necessarily implied fixation of the joint, and immobility was indicated both by the general history and by the morbid specimens produced.

DISCUSSION.

Dr. V. P. Gibney would thank the author for his valuable paper on this important and long-mooted question with relation to hip-disease, and its treatment by counter-extension. The deductions which had been drawn with regard to the usefulness of traction, and especially in causing immobilization, were very interesting. He fully agreed with the author in his statement that there were various kinds of hip-disease, although he had not in his paper discussed this side of the subject. It was common, he believed, at the present day, to classify cases of hip-disease, so-called, into two large divisions, the first including those cases in which there was actual destructive process of the bone; and the second including cases not falling within this category. Almost every physician could bear testimony to the fact that some patients with so-called hip-disease, but in which really only soft parts were involved, giving rise to symptoms simulating disease of the bone, got well under treatment, or even without any treatment, within a short time. Perinephritis in children, or idiopathic perityphlitis, affections which involve the soft parts near the hip, might give rise to symptoms which could readily be mistaken for those of hip-disease. The term hip-disease was less suitable to represent this class of cases than that of articular ostitis or epiphysitis, but perhaps we had not yet arrived at a point where a change in the nomenclature would be desirable. Young girls were sometimes crippled even for years with what appeared to be hip-disease, and on applying a counter-irritant over the hip they recovered within two or three weeks. The trouble had been a neurosis or a hysterical joint.

Dr. T. E. Satterthwaite said that while studying the pathology of caries of the ankle in connection with Dr. Gibney, it was found that the disease usually seemed to have its origin in the cancellous portion of the bone. A number of joints were not infrequently affected in the same individual, which would seem to point to a constitutional rather than a traumatic origin.

After a few remarks by Dr. Judson the Academy adjourned.

The Medical Education of the African Race.—At a meeting of medical teachers and practitioners, called to confer with J. Berrien Lindsley, M. D., LL. D., of Tennessee, in regard to the interests of a medical college for colored students, at Nashville, and held at the hall of the College of Physicians, of Philadelphia, May 8, 1882, Prof. S. D. Gross was invited to the chair and Dr. J. G. Richardson directed to act as Secretary.

Dr. Lindsley, at the request of the chairman, stated that the Congregational, Baptist, and Methodist churches of the North generously maintained, in the late slave States, about twenty-four institutions of learning for the benefit of the colored people, at an annual expense of nearly $300,000. Among these institutions were three medical colleges, one at Washington, one at Raleigh, and one at Nashville. The last of these, the Meharry Medical Department of Central Tennessee College, had buildings costing $20,000, and was, in his opinion, decidedly the most favorably located.

His object was to gain the endorsement of representative physicians in the North, for the plan of creating a National Board of Trust, chartered by Congress, for the medical education of colored people, which should be empowered to promote this most desirable object, by aiding the most promising educational establishment of the kind in the South, and further defraying the necessary expenses of those young persons of African descent who should display superior intellectual capacity, in Northern or European schools, as might best serve the great end in view, the elevation of the negro race. It being further designed that special attention should be paid to the complete preparation of colored physicians as missionaries and explorers in Africa.

Dr. H. Hartshorne highly approved of the proposed plan as explained by Dr. Lindsley, and only feared that unless the great advantages of his scheme were fully understood, it would be difficult to induce all the various denominations interested in this missionary work to thus unite together for its successful prosecution.

Dr. Edward Hartshorne considered Nashville a great intellectual missionary center, and that if we could establish a good medical school there, the best colored men from the whole Southwest would flock to it, and from these the selected few who developed in advance of their race could be sent, on this well devised plan, to Northern colleges, where the best possible medical training could be secured for them.

Dr. L. D. Harlow remarked that he had been very much interested in this admirable project of Dr. Lindsley, and was ready to endorse all that he had planned for the elevation of the black people. He sincerely hoped there would be no difficulty in procuring the requisite charter from our national legislature.

Prof. James Tyson observed that his study of the important subject of medical education had rendered him opposed to the erection of any new colleges, but he did not entertain the same objection to fostering an already established institution. For the last four years colored students had matriculated at the University of Pennsylvania, and one of these graduated the past year with an average as high as that of three-fourths of the class. Another, who will probably graduate next year, has already passed in chemistry, with the usual average of 98 in a possible 100. Only one white student is even reported to have left on account of the admission of these colored men, so that the question is practically settled in regard to the University of Pennsylvania, as it is also in the affirmative in Harvard University.

Dr. J. Cheston Morris believed that, having lived, formerly, on a plantation in one of the Southern States, he was intimately acquainted with the black man's capacities, and he was satisfied that for the next 20, 40, or perhaps 100 years, but a small proportion of the negroes could acquire the preliminary training necessary for a great physician ; until that time, he was convinced that the wisest plan would be to maintain a good medical college in the South, at some central point like Nashville.

Dr. J. Solis Cohen called attention to the fact that in seven years the Meharry school had graduated only twenty-three students, and urged the advantages of combining the three Southern colleges into one strong institution, as soon as possible.

The Chairman, Prof. Gross, remarked, that if the negro race could develop a great physician in a hundred years, it would prove its vast superiority to the whites, who had required some two thousand years to accomplish the same feat. He believed that the blacks had capacities which in time will develop to a very high degree, but for the present the negro must have his own schools. Applicants had always been refused at the Jefferson Medical College, and it would probably be a long time before they gained admittance, if they ever did so; he, therefore, cordially approved of the plan of Dr. Lindsley.

Dr. Lindsley said he knew, from his own personal observation as former Health Officer of Nashville, that there were in that city hundreds of colored people suffering for want of proper medical care. This state of things, lamentable as it was, existed generally throughout the South, because white physicians could not attend the blacks out of charity, to the extent they used to do, when amply recompensed for their services by the owners of these former slaves. It was to provide qualified medical attendants from their own people, for these suffering human beings, that he invoked the influence of the 70,000 physicians of America, and the substantial aid of the benevolent public at the North.

Dr. J. G. Richardson suggested that the question now before the meeting was not so much how far the black man could be medically educated ? but whether this great experiment, which will certainly be tried, shall be attempted under the most favorable circumstances as contemplated by Dr. Lindsley's plan, or whether the pecuniary advantages which contributions from Northern philanthropists would procure, shall be frittered away in the incomplete support of six or eight feeble medical colleges ? He, therefore, moved that a committee of three be appointed by the chair, to prepare a suitable endorsement of the proposed National Board of Trusts, for the medical education of the colored race.

Dr. Edward Hartshorne moved that the committee be authorized to add to its number, and invested with power to act for the meeting; which resolution and amendment were carried unanimously, and Dr. H. Hartshorne, Richardson and Harlow appointed on the committee.

On motion, adjourned.

Jos. G. Richardson, *Sec'y*
Phila. Med. and Surg. Reporter.

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CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

Jaundice. By Alonzo Clark, M. D., Professor of Practice of Medicine, College of Physicians and Surgeons, New York.

Case i.—Male; aged——; occupation, milkman; has been jaundiced for a couple of years; can only walk one flight of stairs; has had pain in the knee joints, and at times gets very drowsy; has clay-colored stools; is sometimes very costive, at others has diarrhœa.

The first organ we shall have to examine in this case will be the liver. He has been more or less jaundiced for two years, the jaundice disappearing half the time. The conjunctiva shows the jaundice more distinctly than any other part of the body. The most common cause of jaundice is an obstruction to the transit of the bile from the liver to the intestines, and the most common cause of obstruction is the gall-stone. This is substantially a case of painless jaundice. There are several affections of the liver that tend to produce it. The carcinomatous affections do not produce it except when a tumor is in a position to press on the gall-bladder. Certain inflammatory actions of the liver will produce it, and certain hypertrophies are attended by it. The patient complains of diarrhœa alternating with constipation; this will be produced by the retention of fæces in the intestinal tube, and being retained for some time, they become irritant and produce watery secretions, causing watery discharges.

Enlargement of the liver is sometimes attended by jaundice and sometimes not. Fatty degeneration is an enlargement, but before it comes to a terminus is always attended by jaundice. Simple hypertrophy, resulting from disease of the heart, is not generally attended by jaundice.

Observe, first, that there is no marked fulness in the region of the liver; there is a little more sinking on the right side than on the left. My finger now rests on the lower edge of the liver, and that organ is sunken away from the walls. I should not know I had my finger on the edge of the liver if it did not move with his breathing; it presses against my finger as he takes a long breath, and the pressure is removed when he breathes out. The upper border of the liver is nearly up to the nipple: it is not very large. The left lobe of the liver should extend 4½ inches to the left of the median line. At that point, however, we get resonance, marked through the liver; it is seven inches enlarged upwards to the left but not downwards. It is not easy to find the upper portion of the left lobe of the liver, because the diaphragm presses upon it, and the liver is directly under the diaphragm. I cannot feel the liver to ascertain whether it is irregular or whether there are nodules on it; the integuments are not very thick, but they prevent my making certain of there being irregularities. The liver then is a little enlarged. The object of my examination was not so much that I supposed it probable that the jaundice is attributable to disease of the liver structure itself as the suspicion that it might come under a class of cases that I think are not described in your text-books, in which, from some unknown cause, there has been an inflammatory action in the capsule of Glisson at the point of its entrance into the liver, and that inflammation has thrown out new material. New fibres have been formed, and they have so contracted as to partly close the ductus communis before it enters the intestine. That is one of the forms of painless jaundice.

I strongly suggest that there is a narrowing, not an entire closure, of the ductus communis; there is no abscess or tumor that could be referred to the gall-duct that does not extend below the border of the ribs and yet there may be a slow delivery of the bile into the intestine from a narrowing of the tube. I come to this conclusion because we find nothing else that can fairly account for the condition. I assume that it is not an absolute closure, for then the liver becomes enlarged. I have a liver which weighed 24 pounds, entirely in consequence of the closure of the ductus communis. What should produce that enlargement it is difficult to say. I suppose it to be a congestion resulting from irritation of the bile in the liver; the liver in such cases is dark and yellow, and if the disease has had a considerable duration it may become almost black; there will be a great amount of black pigment matter deposited in it. Sometimes it shows in spots; at other times the dark color is generally throughout the organ. There are two modes in which a jaundice color can occur; one is the scanty circulation of the blood in the liver, leaving the elements of bile in the blood, that is, the liver does not act as a sieve to separate them, but they are retained in the system, and finally give the patient a light yellow color. The other is the obstruction that I refer to, in which the bile is secreted, passes into the ducts and cannot pass through, being absorbed into the blood again. The effect of that sort of jaundice is, if extreme, to produce very much that condition of the brain that uræmia does when it is extreme, namely, a stupor. If the patients die from the disease they die unconscious, rarely of convulsions, as in uræmia.

Treatment.—The treatment for this case consists in giving bicarbonate of soda. I give it because it is an element of the bile, and an element that makes it more fluid than it would naturally be. It can, therefore, escape through a narrower passage than the ordinary thick bile. It has about as much power to cause secretion from the liver as calomel. I should give it in doses of 1 to 2 drachms per day, 15 or 20 gr. at a time, to be stirred up with water. The best time to take it is after digestion is completed, about 3 hours after taking food. It is the very best remedy against the effusion of gall-stones. I have given it for 30 or 40 years, and have effected some quite unexpected cures. In that case it is given by the test; the patient supplies himself with slips of litmus paper, and tests his urine once or twice a day to see if it is acid or all alkaline; as it is not desirable to keep the urine alkaline for any length of time, the rule in such a case is to take the soda without reference to quantity until the acidity of the urine is reduced to its minimum. There is a chance of the formation of calculi, and the good that you want to effect can be accomplished by keeping the urine in the slightest degree acid, so that it turns litmus paper to the very faintest red. With reference to gall-stones, the carbonate of soda will not dissolve a gall-stone already formed, but it will prevent the formation of any more. Gall-stones are constituted in a very large degree of cholesterine, and the presence of the soda in the system prevents the formation of cholesterine.—*Medical Gazette*.

Clinical Lecture on the Association of Tabes Dorsalis with Syphilis. By Thomas Buzzard, M. D., F. R. C. P., Physician to the National Hospital for the Paralyzed and Epileptic.

Tabes dorsalis is the most frequent of all the chronic affections of the cerebro-spinal axis, and the prognosis in this disease is practically hopeless. There is increasing evidence, no doubt, to show that cases may go on for a very long time without the symptoms becoming materially intensified, and even with encouraging periods of improvement. But as matters stand, we are unable to count upon more than this in any case of a confirmed character. At first sight, therefore, it would seem to be a point of more than ordinary importance to discover whether the disease is so far connected with a syphilitic origin as to encourage us to hope for success by treating the patient energetically with specific remedies.

In many morbid conditions such a discovery, by leading to appropriate treatment, produces the most triumphant results. But, as a matter of fact, in the case of tabes dorsalis expectations that may have been formed of a similar success have not been realized. Now and then, it is true, we meet with cases which improve remarkably for a time whilst iodide of potassium is being administered, but in my experience I have never known a cure to result from specific measures. From mercurial treatment, indeed, which I have had very carefully applied by inunction in a number of cases where the history of syphilis was distinct, I have seen no good whatever, but, on the contrary, as it seemed to me, a tendency to harm.

In 1871, writing upon the subject of syphilitic affections of the nervous system,* I included progressive locomotor ataxy amongst the nervous affections belonging to the tertiary stage of syphilis. At that time the frequency with which a syphilitic history was to be noted in these cases had long impressed me, and I was in the habit of treating my ataxic patients with iodide. But the remarkable absence of successful results appeared to throw so much doubt upon the matter that I carefully excluded the disease from consideration in my work on syphilitic nervous affections.† The connexion between nervous disorders and syphilis was then not generally recognized, and I was anxious to avoid weakening the force of that which was to be said on a very important subject by the introduction of debateable material.

The question of the relation of tabes to syphilis, although it had not escaped the attention of Lancereaux, Duchenne, and other writers, had not been very prominently brought forward before 1875, when M. Fournier, of Paris, expressed a strong opinion on the subject. Out of thirty ataxics he found a history of syphilis in twenty-four. He believed that the tabes in these cases was an outcome of syphilis, although according to his view it does not in these circumstances present any special symptomatology or lesions.

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* *The Lancet*, March 11th, 1871.

† Clinical Aspects of Syphilitic Nervous Affections, 1873–74.

Now, it had been urged by Charcot in 1873 that certain lesions of the spinal cord, primarily developed outside the posterior columns, might at a given moment invade these at a variable height, and produce accidentally, as it were, some symptoms of locomotor ataxy ; but this, he went on to say, was not truly progressive locomotor ataxy.

More recently Dr. Gowers, in an able paper read before the British Medical Association in 1878,* pointed out that it was common for an acute change, as e.g., primary myelitis, which had extended widely through the section of the cord, to clear off from all except the posterior columns, and to persist in these. In such cases a weakness of the legs of sudden onset would give place to inco-ordination of movement, and this would increase so as to present the typical features of locomotor ataxy. Eliminating such cases as these, of secondary origin, he thought that nearly one-half of ataxics had a history of antecedent syphilis.

I do not know that I am disposed to draw a very hard-and-fast line between tabes supposed to be of primary origin and that which is secondary to acute changes. It is certain that in inquiring into the history of many cases which, when they come before us, present all the characteristics of typical tabes dorsalis, we frequently hear a description of symptoms, often long past, which can only be referred to the occurrence of spinal meningitis, usually of a slight and strictly localized character. The fact that some slight thickening of the soft membranes and adhesion to the posterior surface of the cord is commonly met with in post-mortem examination of tabetic cases is well recognized. Vulpian, who was at first disposed to think that this meningitis might be primary, has rejected the idea, because the change is not proportionate to the amount of lesion in the posterior columns, and he now attributes it to a propagation into the membrane of the irritative action going on in the neuroglia. But it is not disproved that initiatory inflammation of the pia mater might spread itself by continuity to the neuroglia. There may possibly be anatomical reasons connected with the disposition of bloodvessels which would explain the confinement of the inflammation which had thus been started to a certain locality of the cord. I am inclined to think also, from certain observations, that a limited spinal meningitis may clear off without leaving traces perceptible to the naked eye in the portion of membrane which has been affected.

In the early part of his history Fredk. J—— had very severe pain in the mid-dorsal region. He could not bend his back without severe pain—a symptom strongly suggestive of meningitis. There was a clear account of a chancre six years before the commencement of his symptoms.

In 1870 I saw a gentleman, aged fifty-eight, who was typically ataxic. He had what he described as "a tremendous sensation of a cord around his waist." There had been constant pain in the back and right side of the spine about the level of the lower dorsal vertebræ for two years, and he frequently suffered from what he called "spasms" in the right hypochondrium. There was a distinct history of syphilis.

I examined, in 1880, a gentleman, aged thirty-three, who had suffered for fifteen months from "a grinding, aching feeling from the left side of the spine to the pit of the stomach. He could walk and had not lost much power in his legs. It was for this strictly localized pain that he sought advice, but examination showed that he was suffering from tabes, and a year later he came to me with paralysis of the left oculo-motor

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*Syphilitic Neuroses, *Brit. Med. Journal, March 1st*, 1879.

nerve. There was history of syphilis of eleven years' standing.

Such examples could be readily multiplied to almost any extent. They can hardly be explained, I think, except by the existence of a transverse and limited inflammatory lesion about the spot indicated, involving either the membranes and posterior roots or the surface of the cord, or both.

The feeling of "waist constriction" which we frequently meet with in tabes is evidently not a necessary part of those symptoms which are referable to that which is the essential lesion in the disease—viz., systematic sclerosis of the postero-external columns. If it were, we should find it in all cases. It is a symptom which is probably dependent upon a transversely localized lesion (meningitic or myelitic), and hence a common aceompaniment of paraplegia. The following case appears to me to have an important bearing on the question :

In February, 1875, I saw in consultation H——, a man, aged forty-five, who was suffering from paralysis of the left oculomotor nerve, involving the eyelid as well as the recti-muscles. Five years previously he had a chancre, which was followed by sorethroat. I found somewhat large almond-shaped glands in his groin. Under iodide and mercury the paralysis of the third nerve rapidly cleared up. But in July of the same year his medical attendant asked me to see him again, and I found him in bed almost completely paraplegic. There was very little power indeed of flexing the thighs upon the hips when I pressed lightly upon his knees as he lay in bed. When the spinal column was pressed upon deeply between the fourth and seventh dorsal vertebræ an obscurely painful numbed feeling was complained of. Below this the trunk and extremities showed incomplete cutaneous anæsthesia. Movement of the spine, as, for instance, when he turned in bed, caused pain at the part of the dorsal spine described, and radiating from it. He complained of startings of his legs, his bladder and rectum were weakened, and there was occasional incontinence of urine. Sexual power was in complete abeyance. Under mercurial treatment he gradually recovered the power of his legs to a great extent, and went away to the seaside.

In November, 1877, I saw him again. His right oculo-motor nerve had then been paralyzed for four days past, and he had very severe neuralgic pain in the forehead for a month. His grasp was equal, and there was fair power in his legs, so that he was able to walk about, but his gait was somewhat tottering. There was some tenderness on pressing upon the seventh dorsal vertebra. The sphincters were weak. Under iodide he lost the paralysis of the right third nerve in a month.

The last time I saw this patient was in October, 1878. He told me that six weeks previously he had been severely attacked with darting pains in his legs, momentary, as if a blunt object had been pushed into him. For some time before this, but how long I could not ascertain, he had suffered occasionally from pains of the character described, but not so severely. His gait was now distinctly ataxic. There was anæsthesia from the knees downwards. He could not stand with his eyes shut, and in bed did not know where his legs were. There was now also diplopia from weakness of the left external rectus muscle. The pupils were contracted. The ophthalmoscope showed grayness of the left optic disc. The patellar tendon reflex was absent in both knees.

Such a case as this in its developed form is not distinguishable by any peculiarities from an ordinary example of tabes dorsalis. Yet it had manifestly traveled to this condition through a phase of meningo-myelitis. It is interesting to contrast this patient's almost total inability to use his lower extremities in July, 1875, with the fair power and capacity for walking about which he showed in 1878. There would seem to be little doubt that the lesion (meningitis ?) which had caused the earlier spmptoms had cleared off, leaving behind a state of spinal cord which gives distinct evidence of the existence of sclerosis in the postero-external columns. Does it not suggest itself as probable that the inflammatory action may have traveled into the connective tissue of the cord through the channel of the inflamed pia mater? I cannot help thinking that in some cases the initial lesion may prove to be a very limited inflammation of the soft membranes of the cord which "lights up," as it were, inflammation in the adjacent connective tissue and leads to sclerosis. It must be allowed, however, that in many cases the most careful questioning elicits no evidence of there having been even a very little spinal meningitis. In such instances the suggested explanation is inadmissible.

We have had in the hospital recently a case which bears upon this subject, and may be shortly related.

Mary Anne A——, aged forty-four, was admitted into the hospital suffering from paraplegia. She could just move the right foot, but with this exception the limbs were powerless. There was also complete anæsthesia to touch and pin-pricks throughout the lower limbs, together with great wasting and entire loss of muscular sense in them. She had incontinence of urine and fæces. On the trunk the anæsthesia extended up to the second rib. Her arms were thin. She was just able to feed herself with a spoon, but not to dress herself. There was great want of coordination in the movements of both arms and hands when she offered to take hold of anything. But beyond this there were fine and somewhat constant flexion and extension movements of the intrinsic muscles of the left hand. The condition was practically one of complete paralysis of the lower extremities with ataxy of the upper limbs. She had acute bedsores which resisted all efforts to restrain their course. Death took place six months after admission.

Now, this patient was married and had given birth to nine children, of whom only three survived, five having died in convulsions and one being stillborn. One child had a rash over its body. The patient had suffered from ulcerated sore-throat, and her hair had fallen out. There is no doubt that she suffered from syphilis. The mode in which her illness commenced is important. A year before she came to the hospital she began to have constant aching in her legs like rheumatism, with "dreadful pricking and shooting in them," severe pain between her shoulders, and daily vomiting. After a few months, the pains in the legs being very bad, she completely and somewhat suddenly lost power, first in one and a week after in the other leg. Numbness now rapidly spread from the right to the left leg, and then to the trunk. At the same time the action of the sphincters could not be restrained, and she lost the power of co-ordinating the upper extremities.

The autopsy in this case showed no change in the spinal membranes perceptible to the naked eye, but there was distinct grey degeneration of the posterior columns, which examination of sections of hardened cord was found to confirm. (Imperfections in the preparation of the sections prevented so minute an examination as would have been desirable. However, Dr. Bevan Lewis, who kindly examined the slides at my request, is able to report the following appearances.)

In all regions alike the columns of Turck and the antero-lateral columns were healthy; the posterior columns throughout showed extensive degeneration. In the cervical enlargement the columns of Goll were much degenerated, and the same lesion appeared notably behind the posterior commissure and along both the radicular zones. In the post-commissural zone the medullated fibres were greatly wasted. Along the radicular zones a few very large fibres were seen. The root fibres of the posterior spinal nerves were evidently affected; they could be traced a short distance only, and were encroached upon by sclerosed tracts. The medullated fibres along the posterior margin of the cord were unusually large, the vessels coarse, and in many cases the perivascular channels widely distended and and filled with coagulated (albuminous?) contents. In the upper cervical region the posterior cornua were sclerosed, the nuclei numerous, the cells rounded and devoid of processes on one side of the cord. The cells on this side were also much smaller and more attenuated than those of the opposite side. The columns of Goll showed several hypertrophied axis-cylinders. The outer group of cells in the anterior cornu of one side presented decided wasting and attenuation of its cells. In the cervico-dorsal region the anterior cornua showed disease of the outer group of cells; these cells were rounded and devoid of processes. In the lumbar cord there was much atrophy of cells of the anterior cornua, especially on one side, and the anterior nerve-roots appeared diseased.

The hypothesis which is admitted by Vulpian * as the most probable is that in the sclerosis of tabes it is the nervous element proper contained in the nerve tubes which is first affected by an irritative lesion, and that the connective tissue suffers secondarily. The difficulty of accepting this view is to my mind very great. One cannot conceive an atrophy of axis-cylinders without some antecedent changes in the carriers of trophic material for the axis-cylinders—i. e., in the bloodvessels and the tissues in which they lie. On the other hand, if a vascular change be the initiatory step, it does not seem difficult to understand that syphilis, which is prone to occasion meningitis, may sometimes lead to sclerosis though inflammation of the soft membranes of the spinal cord.

A few words as to the frequently of association of a syphilitic history in cases of tabes. Erb, in a recent publication,† says that out of forty-four cases he had met with a history of syphilis in twenty-seven. Out of fifty-three cases of my own a probable history of syphilis is noted in twenty-five, but I have reason to think that this figure may not accurately represent the actual proportion, my notes of several of the cases being imperfect. Now, if we add together the statistics of Fournier, Erb, and myself, we shall find that in seventy-six out of 127, or in 59.8 per cent., there was a history of syphilis.‡

It is clear that coincidence is not sufficient of itself to establish anything like a necessary relation. It might turn, for example, that a relation of the following kind existed:—Tabes dorsalis was formerly supposed to be due to sexual excesses; the individual addicted to sexual excess would be, *cœteris paribus*, more exposed than another to the chance of syphilitic infection, and the misfortune attributed to the latter might really be due to the former. I do not support this view; on the contrary, I do not think there is any ground for believing that sexual excess is, at all events, a frequent antecedent of tabes, but I mention it as an illustration of one mode in which there might be a coincidence in the occurrence of syphilis and tabes without any real association of cause and effect. There may be others.

It is necessary also to bear in mind another very possible source of fallacy. There is often great difficulty in ascertaining the date of the earliest symptoms of tabes. There may have been some slight flying pains which have left little or no mark in the recollection of the patient, and in nine cases out of ten have been set down by him to rheumatism. Yet these pains, usually the earliest evidences of tabes, may have occurred *before* he became infected with syphilis. In the case of a gentleman whom I have at present under occasional observation there were neuralgic pains in the *head* some years before he acquired syphilis. Who knows whether these did not depend upon sclerosis of the deep root of the fifth nerve, as is probably the case in the patients whom I showed at a recent lecture? On this account I do not think my statistics are to be depended on as showing with any certainty the proportion of cases in which syphilis was acquired *before* the earliest symptoms of ataxy, and it is evident that the same objection may possibly apply to the figures collected by others. The discovery made by Westphal that absence of patellar tendon-reflex is a very early symptom of tabes will help us greatly in the future in regard to this subject, but it necessarily throws no light upon the date of origin of those cases the notes of which were taken before his all-important observation became common knowledge.

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*Maladies du Systeme Nerveux, Paris, p. 444.

† Deutsch. Archiv f. klin. Medicine, xxiv. Bd.

‡. Since the substance of this lecture was delivered (December 18th, 1879) a very large amount of attention has been bestowed by numerous writers, both in this country and abroad, upon the statistics of this question. Amongst others, Erb, Gowers, Hughlings-Jackson, Westphal, and Althaus have made important contributions to our knowledge. For a very good *resume* of the varied experiences and opinions upon the subject, the reader is referred to an article by Dr. J. L. Prevost, in the "Revue Medicale de la Suisse Romande," January 15th, 1882. As regards my own figures up to the present date, I find that out of one hundred cases of tabes there is some history of venereal disorder in forty-five. In many, I need hardly say, the history of constitutional syphilis is perfectly clear. In several, on the other hand, it is so imperfect that were it not for one's experience of the extremely weak history, which is often all that can be obtained in other diseases of the nervous system undoubtedly due to syphilis, I should be disposed to reject them. In some, again, the investigation was either precluded by circumstances, or accidentally omitted. In others the information obtained could not be depended upon. Reserve must be shown, therefore, in accepting my statistics as representing anything more than an approach to probability. I cannot help envying the certainty which has apparently attended the experience of some of those who have published upon this subject.

The position of tabes in regard to syphilis is peculiar in another respect. Affections of the nervous system which owe their origin to syphilis are not, as such, distinguishable in any very evident manner from diseases unconnected with such infection. The hemiplegia which results from thrombosis of a cerebral artery affected with syphilitic disease follows the same course as hemiplegia consequent on thrombosis of a cerebral artery thickened by atheroma. Syphilitic new formations in connective tissue bring about symptoms depending on lesion of nervous structure, such as might be referable to growths of any other kind. But there are two points especially which frequently afford strong presumptive evidence as to the syphilitic nature of a certain affection. In the case of lesions referable to thrombosis of a cerebral artery there is the age of the patient. Should this be much below that at which degenerative changes may be reasonably looked for in the arterial system, there being at the same time no evidence of changes in the heart or kidneys, I think we may almost certainly refer the arterial thickening to syphilis. So also in regard to growths. As a matter of experience, it is certain that almost all cases of marked paralysis of single cranial nerves (I exclude here the incomplete and transitory paralysis seen in tabes) are due to syphilis. When along with this are conjoined symptoms which can only be referred to the existence of another distinct lesion (one causing, *e. g.*, hemiplegia, monoplegia, or paraplegia), the evidence is greatly strengthened. It becomes, indeed, so strong, and the chance of exception due to the presence of tubercle or cancer is practically so small, that, in the absence of the strongest corroborative evidence of the latter diseases, we should be culpable in treating the case otherwise than as one of syphilis.

But in tabes the circumstances are very different. Take, for example, the question of age. If, we compare the ages of tabetic patients in whom inquiry elicits a history of syphilis with those in which this element is wanting, we are not struck by any marked contrast. When we meet with the case of a young man of twenty or thirty years of age who has hemiplegia apparently resulting from cerebral thrombosis, and in whom there is no history of rheumatic fever, heart or kidney disease, we know at once that his disease is almost certainly the result of syphilis. We are struck by the fact that he is suffering from an affection brought about by disease of his cerebral arteries. The more ordinary cause of such disease is the atheromatous thickening which comes in association with other degenerative changes brought about by agedness. Syphilis induces changes in the arterial coats, which lead to a precisely similar result. The indications are simple enough. But in tabes we are left without aid from this question of age. The disease is one commonly of adult life, which most often commences, so far as we can judge, in the period between maturity and middle age, and whether there is a history of syphilis or not, the large majority of patients are about this time of life.

There remains the question of sex, consideration of which may help us a little. My personal experience is that only 10 out of 100 patients suffering from tabes belong to the female sex. Gowers thus refers to this point: "Whatever it is which determines the occurrence of locomotor ataxy in men and very rarely in women, and which must be regarded as one of the causes of ataxy, operates in conjunction with syphilis in confining the syphilitic ataxy also to men. Other consequences of syphilis also occur in women as well as in men; ataxy in men almost exclusively."* Some years ago, in view of a coming discussion on syphilis at the Pathological Society, I tabulated 100 cases of disease of the nervous system dependent, so far as could be determined, upon syphilis. From this list all cases of tabes were excluded. Sixteen out of the 100 patients were females, but I have since had reason to think that the proportion of females affected with disease of the nervous system consequent upon syphilis is far greater than this. Again, the occurrence of tabes in females of good social standing is surely of extraordinary rarity.† Are females of this class equally exempt from syphilitic affections of the nervous system of a kind which is generally recognized? I am sure that they are not, and that in this respect there is a very striking contrast.

If tabes be very frequently of syphilitic origin, how is it that females, who bear their fair share of other diseases of the nervous system of specific origin, furnish only ten per cent. to the ranks of the former disease?

Whilst it appears to me incontestable that there is a remarkable frequency of association between syphilis and tabes dorsalis, I do not think, all things being considered, that the time has yet arrived for us to draw safe inferences as to the precise nature of the relation.—*Med. Times.*

On two cases of Ovariotomy, and Remarks on Ovariotomy in Chili. By Richard Cannon, L.K.Q.C.P., L.R.C.S. I., M.D. Univ Chili, Late Surgeon R. N., etc.

Case 2.—C. A——, single, aged forty-three, had one child early in life; menstruation, with occasional attacks of menorrhagia, had been abundant until three years since, when a tumor on the left side of the pelvic cavity was noticed. The swelling had gradually increased, and menstruation became suspended. The patient now presented a tumor about the size of the womb at the eighth month of pregnancy, freely movable, but in general hard, except that fluctuation could be in parts detected. The swelling could be felt descending into the hollow of the sacrum, and had pushed out the posterior wall of the vagina, forming a large rectocele which protruded in an ovoid mass from the vaginal orifice. At the umbilicus there was a very large hernia. The existence of former pregnancy, which was denied by the patient, was diagnosed from the lineæ albicantes, on pointing out which she acknowledged having had a child. The uterine sound could not be passed. The patient suffered from much dyspepsia, flatulence, difficult respiration, and a suffocating cough. Her life was rendered miserable and she was anxious for relief. The tumor was diagnosed as probably ovarian, but from its solidity I was prepared to meet, perhaps, with a large fibrocystic uterine tumor, and deal with it by hysterotomy. Assisted by Drs. Cooper, Schrœders, and Thiele I operated on the 26th December, 1880. Here we follow, *haud passibus æquis*, the teachings of Mr. Spencer Wells as regards the details of operating. A large polycystic right ovarian tumor presented, which was brought out and tapped as each large cyst came into view. Innumerable minor cysts occupied the deeper portion of the tumor, forming a mass as hard as an ordinary fibroid tumor. Some omental adhesions were secured by fine silk ligatures cut short, and the pedicle secured by an Atlee's clamp. But now a smaller tumor of the left side was found which pressed into the pouch of Douglas and protruded the recto-vaginal septum. This tumor was more made of smaller cysts than the other, and its pedicle, being too short to allow of the application of another clamp, was tied with a strong silk ligature and left within the abdomen after closing the wound. Deep and superficial sutures of silk were used to close the incision, and solid perchloride of iron was applied to the stump of the pedicle. A morphia suppository was administered and ice given by the mouth, whilst nutrient enemata were applied by the rectum. Vomiting and violent accessions of cough and hiccough came on, all of which strained violently the wound, of which the juxtaposition was rendered still weaker by the existence of the large umbilical hernia. The patient sank forty-eight hours after the operation. No *post-mortem* examination was allowed, and so great is the prejudice of Chilians against *sectiones cadaveri* that even the clamp, much to my disgust, went to the grave with the patient.

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* Loc. cit.

† Out of 100 cases of tabes of which I have notes only three occurred in ladies. It has a significant bearing on the question under discussion that two of these are single women, in whose cases the idea of a specific cause may be dismissed.

Case 2.—M. L—, aged forty-eight, is mother of two children, born many years since (a peculiarity of practice in Chili is that patients never know their own age, or the age of their children, but date from some remarkable earthquake or the Spanish bombardment). This patient stated that the tumor had been growing for fourteen years, and was a *falso embarrasso*, or molar pregnancy, which had resulted in a tumor. She stated that menstruation had not taken place since the existence of the supposed pregnancy. She presented a tumor of about the size of the pregnant uterus at term, which on examination proved to be a large ovarian tumor. The patient suffered much from difficulty of breathing, constipation, and other symptoms, and was most anxious for relief by any means. Accordingly, on the 11th July, 1881, I operated, assisted by surgeons of six different nationalities, and turned out a large single unilocular tumor without any adhesions. Not a single ligature was required, and the pedicle, secured by a common clamp, was touched with solid perchloride of iron and dressed with carbolic gauze and lint steeped in carbolic acid and oil. Slight vomiting occurred during the first day, but afterwards all went well. Listerian precautions not having been followed out with strictness some suppuration took place about the sutures, which were removed on the eighth day, and on the tenth the clamp. A little matter formed also about the pedicle. At the end of three weeks the patient was up and thoroughly convalescent.

Ovariotomy is now such a common operation that my only object in publishing these cases is to call to notice the results we have had in this country up to the present.

So far as I can learn the thirteen cases have been as follows: (1) Dr. Thévenot (French): An unfavorable case; multilocular with adhesions; effusion of the contents of cyst into the abdominal cavity; patient strumous; result successful. (2) Dr. Page (Chilian Swede): Large cyst repeatedly tapped; pregnancy shortly before operation unsuccessful. (3) Dr. Thiele (German): Single cyst; patient placed under unfavorable circumstances; result successful. (4) Dr. Dessauer (German): Ovariotomy performed twice on the same subject;both operations favorable. (5) Dr. Cooper (English): Two operations; single cysts without adhesions: both operations favorable. (6) Dr. Schrœders (Russin Finn): Single cyst; young patient; result favorable, but intense neuralgic pain, as from a painful stump, came on and rendered the patient's life miserable. (7) Dr. Cannon (Irish): One double ovariotomy unsuccessful; one single successful. (8) A case in Concepcion, South of Chili; successful. (9) Two cases in the general hospitals of Valparaiso and Santiago, both unsuccessful. One case of hysterotomy, for cancer, has proved fatal. We have thus had up to the present a favorable result in 68 per cent. of our cases. In private practice two cases only, placed under most unfavorable circumstances, have been unsuccessful. The hospital cases were placed under the worst hygienic conditions; for here, in the public hospitals, all septic diseases ride rampant and lead the poor patients by an easy descent " unto the mouth of Orcus.'—*Lancet.*

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CORRESPONDENCE.

TONICA, LASALLE CO., ILL., June 23, 1882.

DR. E. S. GAILLARD.—DEAR SIR :—In answer to "Inquirer," in your journal of June 17th, (*American Medical Weekly*), for a remedy in chronic intermittents, I would say that I have had the best success with equal parts of tincture of iodine and Fowler's solution in ten drop doses three times a day, after once interrupting it with quinine. In fact, this has never failed me thus far, though ours is not the most malarious region of Illinois. Larger doses may be given at first if necessary, but best after meals.

GEO. N. JENNINGS.

DIALYZED IRON IN THE TREATMENT OF ARSENICAL POISONING.—It is not my intention to enter into an exhaustive paper ou the subject of Arsenical Poisoning, but simply, as a duty, to lay before the profession what I consider a most valuable aid, the administration of dialyzed iron. In the smelting of lead and silver ores, one of the worst features is the constant inhalation of arsenical fumes. When first employed by the Alta Montana Company, to take charge of their hospital, a number of cases of arsenical poison came under my observation, and they were the more difficult to treat on account of their complication with "leading." I tried the various remedies recommended for such cases, with but poor results. At t imes I felt that old saying, " Throw physic to the dogs," was but too true and applicable. At last I was led to try dialyzed iron, and was met in all cases with most gratifying success, as is evidenced by the following cases:

Two carpenters were engaged in roofing a portion of the smelting building, and were in such a position that the wind carried the fumes into their faces. Some workmen below noticed one of the men swaying to and fro, and about ready to fall, while the other was laboring hard to reach the ground. They were helped to the hospital, and were suffering with severe pain in stomach and bowels, nausea, vomiting, vertigo, and with a profuse "nose-bleed," tremor in lower limbs, and almost prostration. A wineglassful of dialyzed iron was given immediately. The nausea ceased, and at the end of one hour the men were able to walk to their cabins, carrying with them a bottle of the iron, to be taken in drachm doses every half hour. At the end of twenty-four hours they complained only of weakness, such as would result from a a severe diarrhœa. The second day they resumed work, entirely free from all pain and effects of the arsenic. A number of men employed about the smelting furnace, and especially in dipping the molten lead, have been apparently prostrated from the effects of the fumes, and were in every case relieved by dialyzed iron. A mild purgative was given within twelve hours. I have recommended, and, indeed, insisted on, every man who is exposed to the arsenical fumes taking a dose of the iron daily. The consequence has been that we have had but one case of poisoning needing hospital treatment, and this one insisted that his case was one of " indigestion and dyspepsia," and would take nothing until compelled to enter the hospital, where, under the administration of dialyzed iron, he speedily recovered.

In the past two years, I think I am safe in saying that fully two hundred cases of arsenical poisoning have been cured in this camp by dialyzed iron. I could cite any or all of them, with symptoms, treatment, etc., But I think it unnecessary, as they so nearly resemble those already mentioned; suffice it to say, that all experienced the nausea, griping, vomiting, muscular tremor, etc. I have given the iron, in half-ounce doses, three times daily, with no constitutional disturbances whatever, even after ten and often twenty days' administration. The teeth are not discolored, bowels not constipated, and digestion not deranged.

The men have learned its virtues, and come regularly with "Please fill my iron bottle again." They will not do without it any more than an Irishman will do without his "salts and senna." It has saved many a man his wages and many a day of sickness. In fact, I feel convinced that this preparation is indispensable where men are liable to the fumes of arsenic.

Without a remedy of this kind, I am satisfied no man, however strong, could inhale the fumes incident to smelting, where the ores contain arsenic, and stand it more than three or four days. I can fully and confidently recommend this preparation of iron to the profession, and even to foremen of smelting works where there is no physician, for it is harmless and invaluable. "An ounce of prevention is worth a pound of cure;" or a "pound of cure" is worth infinitely more to a company than are hospitals full of men poisoned with arsenic. Our hospital has been built, medicines bought, physicians and nurses paid, and accommodations for thirty beds provided inside of two years, by a small monthly assessment on each miner and laborer employed by the company, and all are satisfied; none more so than the smelter hands, who can and do get a "bottle of that iron," and keep at work.

The preparation which I have used, and to the good effects of which I can testify, is Wyeth's, of Philadelphia.—*Phil.Med.Rep.*

A. M. BULLARD M. D.

Wickes, M. T

REVIEWS.

"Judex damnatur cum nocens absolvitur."

A PRACTICAL TREATISE ON DISEASES OF THE SKIN. By LOUIS A. DUHRING, M.D., Professor of Diseases of the Skin in the University of Pennsylvania, Dermatologist to the Philadelphia Hospital, etc., etc. Third edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1882.

This work has been so repeatedly noticed in this journal that there is no necessity for doing so again, further than to call attention to the fact that another edition has appeared, fully revised and "brought up to date." It is the equal of any work, domestic or foreign, on this subject and is of course recommended without reserve.

DISEASES OF THE EAR IN CHILDREN. By ANTON VON TRŒLTSCH, M. D., Professor in the University of Wurzburg. Translated by J.Orne Green, A.M., M.D., Aural Surgeon, Boston City Hospital, etc. New York: William Wood & Co. 1882.

There is perhaps no trouble more annoying and distressing to family and physician than ear-ache in young children. It baffles often the discernment and resources of the best medical men. This little work will therefore be welcomed by all. It is excellent and reliable.

A TREATISE ON DISEASES OF THE EYE. By H. D. NOYES, A.M., M.D. Professor of Opthalmology and Otology in Bellevue Hospital Medical College; Surgeon to the New York Eye and Ear Infirmary; President of the American Ophthalmological Society, etc. 8vo. pp. 360. New York: Wm. Wood & Co.

This volume is one of the Wood library series. The paper and printing are below the standard expected and usually manifested by this house. The cuts also are poor specimens of the engraver's art. The colored plates are exceptionally bad. It is true the price asked is small, but the facts stated are none the less true. So far as the publishers' work is concerned, the book is justly subject to criticism.

In regard to the work of the author, this can be praised without hesitation and without reserve. There are, of coursey, man volumes of the kind, but this one is the equal of any of them. It is especially a good book for the general practitioner who must have some work of this kind. The author has done the profession good service by its preparation and publication.

THIRD ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF ILLINOIS. 1881. pp. 325.

This report contains the names of 5,598 physicians and midwives to whom the Board has granted certificates. The secretary, Dr. John Rauch, has done very excellent work:— Medical colleges selling diplomas without due course of study on the part of the applicant, are reported. Thirteen medical colleges sell diplomas which this Board will not recognize ; these institutions are not regarded as in good standing. The Board is doing good service, and perhaps if other State Boards would investigate medical colleges said to be in bad repute, many of the crimes and evils of diploma-selling would be terminated. The requirements of the Illinois Board from all applicants for certificates are increasingly rigid. This is as it should be and all wish such a Board distinction and success.

MATERIA MEDICA AND THERAPEUTICS ; INORGANIC SUBSTANCES. By CHARLES D. F. PHILLIPS, M.D. Edited and adapted to the U. S. Pharmacopœia by Laurence Johnson, M.D. 2 vols., octavo, pp. 638. Wm. Wood & Co.

This volume is the companion and conclusion of a work issued several years since. The author has been too ill to sooner complete his task. The portion devoted to an exposition of current knowledge on oxygen is very good ; so, also, are the parts devoted to a consideration of phosphorus. In connection with the study of arsenic, this volume is better than the average of works now before the Public. The therapeutical portions are, as a rule, fair, but contain nothing original. The bromides receive full attention, and the author's resumé is good. His free quotations from European authorities show that his studies have been varied and comprehensive. The indexes are well arranged. A fair book.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

INTRA-CRANIAL CIRCULATION DURING THE HEART'S INACTIVITY.—M. Franck has detailed to the Société de Biologie an experiment which completely ruins the classic theory of Richet on the role of the cerebro-spinal fluid in cerebral anæmia dependent upon a stoppage of the heart. It is generally admitted that the liquid of Cotugno oscillates from the cranial to the spinal cavity, and inversely, with each cardiac revolution; thus filling the void produced in the skull during the heart's diastole and returning to the spine at the moment that the arterioles of the cerebral pulp are filled. Franck places an elastic ligature about the meninges of the superior part of the cord, and the heart being stopped, he finds by the aid of an opening in the skull, that instead of a retraction of the brain there, is a tumefaction with intense congestion of the veins, and considerable blood pressure. It follows that arterial anæmia is accompanied by nervous congestion; the void produced in the cerebral pulp by the diminution of calibre of the arterioles is compensated for by the repletion of the veins and not by an afflux of cerebro-spinal fluid.—*Progrès Medical.—St. Louis Med. and Surg. Journal.*

TRIPOLITH FOR BANDAGES.—A writer in one of our exchanges suggested that tripolith would be a good substitute for plaster of paris. It was first recommended by Langenbeck as being lighter and more durable than plaster. It was said further that the dressings harden sooner, and when once dry and hard never absorb any moisture. It is thus possible for patients to bathe while wearing the tripolith dressing. Dr. Sam'l N. Nelson (*Annals of Anat. and Surg.*, April, 1882) has tried it and condemns it as a material for plastic splints. He says that it sets so quickly as to require haste in its application. It contains a harsh, gritty substance, and is not "of fine quality." It is much more expensive than plaster. It does absorb moisture, and is worse even in this respect than plaster, as shown by a splint applied to the leg of a little boy, whose urine caused it to granulate and come to pieces. Further trials with a fractured clavicle and a Sayre's jacket made of tripolith showed it to be utterly untrustworthy.—*Louisville News.*

STRETCHING THE OPTIC NERVE.—Dr Kummels, of Hamburg, has stretched this nerve seven times in five cases. Partial or complete loss of sight from atrophy of the nerve, was the pathological condition before operation. Where blindness was not complete, there was some improvement. The operation was performed by passing a curved hook through a slit in the lower and outer part of the conjunctiva near the cornea; the optic nerve is then caught and stretched, "not too strongly." Slight symptoms follow the operation.—*Med. Record.*

BILLROTH'S OPERATIONS.—It is no wonder that Billroth does remarkable operations. In the first place, he is responsible to no one; there is nobody to question him and to ask, why do you do this or why do that? The patient has not a word to say in the matter. If Billroth determines to do an operation, that is the end of it; he is supreme. If the patient recovers, all right; if he dies, all right; not a particle of difference either way. I do not know if he even has any particular satisfaction in the recovery of the patient; it all lies in the fact of having done the operation. In the second place, Billroth has been first professor for years. He has the most abundant material of all classes, quantities and kinds. He does all kinds of surgery, including everything relating to the female generative tract. There is no specialty of gynæcology of any consequence here. There is not a day in the year, and has not been for years, that Billroth has not done major operations. I do not mean amputation of limbs or resection of joints—he would not look at such a thing. Why! he whips out a goitre as a sort of byplay while the patient is being etherized. To take out a tongue is easy for him, and he ties the lingual arteries on both sides with the utmost ease. So exceedingly familiar is he with the topographical anatomy of the body that he rarely uses a director, but cuts right down to the place. He stops at nothing. The other day he was removing a cancerous ovary which was found to be adherent to the bladder and part of the small intestine. Does he stop? No! He cuts out a section of the bladder, stitches it up, cuts off seven inches of the intestine, stitches the ends together, removes the growth, closes the wound, and the woman recovers. I saw a man in the ward with a cancer of the stomach at the pyloric end, and after opening the abdomen, he found the disease so extensive, involving so much that he could not remove the growth at all. Does he close up the wound? Not he! He cuts down to the healthy gut, snips it off, cuts a hole in the healthy part of the stomach, stitches the gut to it, and the man is getting fat. Now I say that, to be sure, they are wonderful operations; but why shouldn't they be? Billroth has attained this boldness and amazing skill in surgery by easy stages and after years of daily operating. Another thing, if he proposes doing an operation a little new or out of the way, he has one cadaver or a dozen to experiment upon, if he wants them, at any time or hour of the day. There are twenty to thirty bodies in the pathological rooms every morning.—*Dr. McClelland, in the Philadelphia Med. Times.*

PHILADELPHIA HOSPITALS.—According to a local paper, a man who had been carried to a Philadelphia hospital while suffering from the effects of a severe contusion, was asked if he had been treated kindly there. "Considering all things," he answered, "I have no right to complain. They amputated both my feet, removed my clavicle, cut off my right arm, trephined me, took out a piece of my inferior maxillary, sawed my left os innominatum in two, and were about to exsect five or six ribs, when a fire broke out in the establishment, and the police got away with the rest of my body in safety."

THE CEREBRAL CIRCULATION.—Francois Frank (*Gazette des Hopitaux*) has been making some experiments upon the intracranial circulation during the arrest of the heart. It is well comprehended that when the blood ceases to flow to the brain that no vacuum can exist between the walls of the skull and the brain itself. It is necessary that something should replace the arterial blood. It was not the cephalo-rachidian fluid, as was easily demonstrated by a ligature upon the spinal cord preventing its return to the brain. By the aid of registering apparatus, he demonstrated that on the side of the sinus the pressure was equal to the general cephalic pressure. During the arrest of the heart the veins swell, especially in the deep parts, and particularly in the cranial cavity. The arterial anæmia is replaced by a venous congestion.—*Journal of Mental and Nervous Diseases.*

La France Medicale contains notes of a case of extremely low temperature following a prolonged exposure to cold during an excess of drunkenness. The patient was picked up unconscious on the street, and died the next day, with a temperature of 79° F. (26° C.) January 27, 1882.

THOMAS SYDENHAM.—"And, in truth, when I come to die, I trust I shall have the satisfaction of being inwardly assured that I have not only endeavored, with the utmost diligence and integrity, to recover the health of all those who have been my patients, of whatever rank or condition they were, none of whom have been otherwise treated by me than I desired to be, if I should be seized by the same distempers; but also that I have contributed, to the utmost of my abilities, that the cure of diseases might, if possible, be prosecuted with greater certainty after my decease; being of opinion that any accession to this kind of knowledge, though it should teach nothing more pompous than the cure of the toothache, or corns, is of much greater value than all the vain parade of refinements in theory, and a knowledge of trifles, which are perhaps of as little service to a physician in removing diseases, as skill in music is to an architect in building."

To make a differential diagnosis between the inter-costal neuralgias and pleural or pulmonary disease, observe two facts: The neuralgias are associated not only with pain, but also with tenderness on pressure; the pulmonary processes by pain alone. The second fact is that neuralgias are unattended by fever; the reverse prevails in the opposite conditions.—*E. T. Bruen, in Pocket-Book of Phys. Diagnosis.*

PROLIFIC.—The 20th of December, 1881, I attended a lady of twenty years in her first confinement, who is next to the oldest of sixteen children (seven sons and nine daughters) ten of whom are still living. The father is now forty-one and the mother forty; both well and hearty. They were eighteen and nineteen respectively when married. All were single births and full term children. They live in New York State.—*A. H. Foster.*

RHUS TOXICODENDRON.—(Poison Oak.) Having noticed quite a number of remedies offered in the journals during the past twelve months for the cure of the distressing rash caused by poison oak, I offer a specific in "sassafras tea"—an infusion of the root or better the bark of the root of red sassafras—for there are certainly two varieties, known as the red and the white sassafras. Bathe diseased surface frequently, or constantly in the cold infusion, or, better, apply a wet cloth. I am very susceptible of this poison myself, and stumbled upon this remedy from painful experience about 15 years ago. I have used no other remedy since that time, though frequently called upon to prescribe for this poison, and in several cases that were aggravated by the application of various remedies, many of them worse than the disease. In such cases I advise the warm infusion as a drink three times a day, which, with sugar and cream, makes a pretty good substitute for tea or coffee. I have found this remedy a success in other skin diseases.—R. L. Hinton, M. D., in *Southern Medical Record.*

Ovariotomy.—The thirty-fifth annual report of the Samaritan Free Hospital, for the year 1881, contains various matters of interest. We refer to the report chiefly for the statistics of ovariotomy and its success during the last year. The time has gone by when any hospital or any single operator had a monopoly of skill in regard to this operation. Nevertheless, the association of this hospital with the triumphant vindication of ovariotomy as not only a safe, but a life-saving procedure, gives its operations somewhat of a special interest still. During the year 1881 there were 84 ovariotomies and 10 deaths. Some were done with antiseptic precautions and some without. Dr. Bantock treated his cases non-antiseptically. Of 34 of his cases 8 died, or 23.52 per cent. Dr. J. Knowsley Thornton operated antiseptically in 41 cases, of which only 2 died, and Mr. Meredith had 9 ovariotomies, with antiseptic precautions, of which none died. Dr. Bantock explains in a note that 5 of his 8 fatal cases died from causes having no bearing on the question of antiseptics—viz., 2 from shock and the severity of the operation, 2 from hæmorrhage, and 1 from intestinal obstruction. Even so, there remain 3 deaths in 34 ovariotomies treated without antiseptics, as against 2 in 50 cases treated antiseptically. The result is not otherwise in regard to other operations. Thus of 87 non-antiseptic operations 13 died; while of 83 antiseptic operations, or, ncluding Mr. Meredith's, 94, only 5 died. The tables include 9 oöphorectomies; of these 1 died in the non-antiseptic series. It is evident that this operation will have to be undertaken with considerable reluctance and care, whether we regard the risks of it or the moral questions arising out of such a serious mutilation.—*Lancet.*

Bladders of Ice in Mammary Abscess.—Dr. Hiram Corson (*Amer. Jour. Obstet.*) speaks in high praise of applications of ice in bladders to inflamed mammæ to prevent abscess, or even if abscesses have formed, to limit the destructive process. He has followed this practice for twenty-seven years and in no instance, if suppuration has not already taken place, has he failed to disperse the inflammation at the same time that he brought comfort to the patient.—*Pac. Med. & Sur. Jour.*

Death Under Ether.—The following fatal case occurred whilst the patient was under the influence of ether :—

Miss M——, aged fifty, was suffering from blood poisoning due to the absorption of septic products, which had for some time been accumulating above and around a decomposing fibroid polypus uteri as large as a child's head, which so filled up the vagina that it prevented the proper excretion of the genital discharges, which could not be kept odorless, though iodine lotion injected with a long tube was frequently employed. Although the patient was much exhausted and had mitral valvular disease, it was deemed advisable to give her the chance an operation would afford, and save her if possible from the slow death to which her disease was surely leading. She was very nervous and exhausted previous to the administration of ether, which however she took well. The operation was tedious, lasting one hour and twenty-five minutes, owing to the difficulty of retaining the wire écraseur round the slimy rounded polypus, which had no pedicle, but merely protruded from the cervical uterine tissue. The patient's breathing was throughout fair, but her heart was very weak and required brandy three or four times to rally its power. Her hands and feet became cold and clammy and could not be warmed. Very little ether was required towards the end to keep her sufficiently unconscious. About five minutes after the operation was completed, and of course a similar time after any ether had been given, and whilst one of the assistant operators was pulling down the uterus and examining its cavity with his finger, the patient suddenly gasped and ceased breathing, the carotid pulse at the time beating firmly. Artificial respiration was immediately resorted to and galvanism applied to the heart and vagi. The patient was also held head downwards, but a gush of blood from the mouth and nose caused this procedure to be given up. Amyl nitrite was applied to the nose, and three drops of solution of nitro-glycerine (one per cent.) were given. The heart ceased about one minute after the respiration, and though artificial respiration was persevered with for fully fifteen minutes no signs of life appeared. There were no indications of asphyxia, the face being pallid, the lips blanched, and the jugulars not overdistended, and the appearances were in favor of death from syncope, though respiration ceased first.

No post-mortem was made, all concerned agreeing the patient had died from shock. The source of the blood during the inversion of the patient is unknown. This was the only case which had died during anæsthesia in the practice of the administrator, who has given bichloride of methylene seventy-six times, chloroform twenty-eight and ether four times, in operations mainly on the genital organs, lasting frequently over an hour. Junker's apparatus has almost always been employed for the two former.—*Lancet.*

How the Fibrinous Clot of an Aneurism is Formed.—The old and long-accepted view that laminated aneurismal clots are formed by a retarded blood-current depositing its fibrin in successive layers and the late theory of Broca, by which clots were classified as vital, active, or fibrinous, in contradistinction from those that were passive or mechanical, have been re-examined by Dr. H. D. Smith, of New Orleans, with special reference to a case of fusiform aneurism of the femoral. He had been much struck on previous occasions with the irregularity in the disposition of the fibrinous layers, differing as they did much from types that have been described. In this present instance he found abundant evidence to prove that the original fibrinous deposit, which measured only 2¼ inches in diameter, had been separated from the wall of the vessel, allowing the blood to pass behind it. The laminæ also were not concentric, but imbricated as a rule, and it was plain that the blood-current wave had swept in different directions, at different times. The appearances called to mind the arrangement in the corollary petals of a flower like the rose, rather than the coatings of an onion, which has been the object so often selected for comparison. The cause of these peculiar deposits he traces to various conditions, and even to the position of the patient. When the fibrin is deposited between the clot and the sac, ridges and columns are formed, which at first are rectangular to the sac, but subsequently are pressed down by the onward current of the blood, which in passing deposits another series. The blood corpuscles are thought to be active agents in the organization of the thrombus. Each change in the form of the tumor necessitates a change in the manner in which the fibrin is deposited.—*Annals of Anatomy and Surgery.*

Malaria in Rhode Island.—This State had been free from malaria for the past fifty years, until the summer of 1880. At this time an endemic of intermittent fever occurred at Nyatt. During the past summer, Dr. C. V. Chapin tried to estimate the extent of the disease in the city of Providence. He obtained reports of about 300 cases.—*Medical Record.*

GRADIENTS FOR SEWERS.—In many towns, especially those situated on the sea coast or estuaries, it is very difficult to obtain a fall sufficient to prevent deposit in the sewers. Those who have to carry out new drainage works, says the *Building News*, ought to know the experience of engineers on this question, and we, therefore, give a few figures that may be useful. Mr. B. Latham, C. E., in his "Sanitary Engineering," says "that, in order to prevent deposit in small sewers or drains, such as those of 6 in. and 9 in. diameter, a velocity of not less than 3 feet per second should be produced. Sewers from 12 to 24 inches diameter should have a velocity of not less than 2½ feet per second, and in sewers of larger dimensions, in no case should the velocity be less than 2 feet per second." Of course, small sewers require a greater fall than large ones. For 4 inch pipes a greater velocity than 3 feet per second may be given. Mr. Bailey-Denton, in his work, states that for ordinary sewage a mean velocity of 150 feet per minute is required, and this opinion agrees with that of Mr. John Phillips, of the Westminster district. Mr. Hawksley and Sir Joseph Bazalgette both think a velocity of two miles per hour, or 176 feet per minute, necessary when running three-quarters full. When running half full, 165 feet is sufficient, and 146 feet when one-third full, according to the latter authority.

The following may be observed as safe falls for circular drains running half full: For 4 inch pipes, a grade of 1 in 36; 6 inch pipes, a grade of 1 in 60; 9 inch, 1 in 90; 12 inch, 1 in 200; 15 inch, 1 in 250, 18 inch, 1 in 300; 36 inch, 1 in 600; 48 inch, 1 in 800. Mr. Wickstead's table of inclinations gives rather flatter gradients. These gradients cannot be obtained in some towns without deep cuttings, which would make the outfall preposterously deep. Pumping has to be resorted to in some towns, where these gradients are impracticable, unless some other means of projecting the sewage by pneumatic action, as in Shone's system, be adopted. The volume of sewage must be sufficient also besides the gradient to insure self-cleansing.

CRITERIA OF INSANITY.—One of the pupils of Esquirol asked his teacher to furnish him with a sure criterion for distinguishing the limit that separates reason from insanity. The next day Esquirol invited his pupil and two individuals, one of whom was most correct in his appearance and in his language, while the other was very loquacious, full of himself, and of his future. When taking leave the pupil reminded his master of the criterion which he asked of him on the previous evening. "Answer the question for yourself," said Esquirol. "You have just taken dinner with a madman and with a sane individual." "Oh!" answered the pupil, "the problem is not difficult; the sane man was that distinguished and well-informed man; as to the other he was a chatterer and a fool who ought really to be shut up." "Ah!" replied Esquirol, "you are making a great mistake; the one whom you took to be so very wise, believes himself to be God the Father, and affects in his manners the reserve and dignity which he believes belongs to his position; he is a patient at Charenton. As to the young man whom you took for a fool, in him you see one of the most illustrious of French authors—he is M. Honore de Balzac."—*British Medical Journal.*

THE ACT OF ROTATION.—Bechterew (*St. Petersburger Med. Wochenschrift*) has made a series of experiments upon dogs in regard to rotation of animals on their long axis after injuries to the brain. He arrives at the conclusion that not only injury to the middle and posterior cerebellar crus, and deep injury to the medulla oblongata, produce rotation, but that lesion of the inner part of the crus cerebri in its whole course, from the thalamus to the pons, can also generate it. When the inner part of the crus cerebri is injured the rotation is about the uninjured side, whilst a lesion of the external layer of the crus cerebri causes rotation about the side of injury. The rotation about the long axis is produced through a lesion of those fibres which go from the cerebellum through the upper part of the crus cerebri to the corpora quadrigemina.—*Journal of Mental and Nervous Diseases.*

ALCOHOL FROM ACORNS. — H. Dill (*Chemists' and Druggists' Bulletin*) has made experiments with acorns in the manufacture of spirits, and is satisfied that alcohol equal to that made from grain can be produced from them. The acorns are freed from the outer husk and ground finely, then they are mashed with malt and allowed to ferment in the usual manner. The analysis of the acorn, after the same was freed from the husk, gave the following result: Starch, twenty and twenty-eight one-hundredths per cent.; gluten, eighteen per cent.; tannic acid, two and eighty-six one-hundredths per cent.; fiber, seven and fifteen one-hundredths per cent.; water, fifty-one and seventy-one one-hundredths per cent.

CASE OF RECOVERY FROM CIRRHOSIS OF THE LIVER IN WHICH PARACENTESIS ABDOMINIS WAS PERFORMED TWELVE TIMES. —This case, reported in the *Lancet*, May, 1882, p. 730, by Dr. R. A. D. Lithgow, occurred in an intemperate man, who was induced to leave off his stimulants, and who eventually returned to his duties almost quite well. After three years and a half he relapsed into his intemperate habits, and the disease became again developed.—*Richard Neale, M. D., in London Medical Record.*

HÆMORRHAGE AFTER TONSILLOTOMY.—Lefferts (*Archiv of Laryngol.*, Jan. 1), in 500 tonsillotomies found: 1. A fatal hæmorrhage very rare. 2. A dangerous one occasionally. 3. A serious one in both immediate and remote results not very unusual 4. A moderate one requiring direct pressure and strong astringents to check it common. In the majority of cases no trouble is experienced.—*Maryland Med. Journal.*

THE SIXTH CEREBRAL VENTRICLE.—The sixth cerebral ventricle is a feature of coarse encephalic anatomy, commonly ignored in text-books and monographs dealing with the brain. Like the fifth ventricle, which is not a true ventricle—that is, not derived from a modification of the lumen of a medullary tube—it is a secondary formation. Just as the fifth ventricle is formed by the mesal faces of the atrophied hemispheric walls or the septum lucidum, the callosum and fornices, so the sixth is formed by the splenium of the callosum and the fornices. It is not constant, being found by Techini and Staurenghi in twenty-six subjects out of one hundred and forty-five. The cavity is lined with epithelium and may become the seat of a hydropsy. This "ventricle," first described by Verga, is known to the German anatomists as the "Fornixventrikel."—*American Journal of Neurology and Psychiatry.*

ALKALINE TREATMENT OF STERILITY.—Charrier (*La France Medical*, May 24, 1881) has recently called attention to sterility produced by a cause which he regards as but little known, but which has received much attention in the United States, namely, acidity of the utero-vaginal secretions, which may be acid enough to redden litmus paper. Second, that this acidity may prove an obstacle to fecundation, as spermatozoa died in a medium even slightly acid. Third, to remedy this normal acidity of the utero-vaginal liquid, an alkaline treatment (alkaline drinks and baths) should be used, and lukewarm alkaline injections. Fourth, that this acid state having been corrected, and the secretions having become neutral, the obstacle to fecundation is removed, and conception may take place. Fifth, that this disappearance of acidity under the influence of alkaline treatment explains the success with which sterility has been treated at alkaline and sulpho-alkaline watering-places.

RESECTION OF A VERTEBRAL BODY.—Dr. J. Israel (*Berliner Medicinische Wochenschrift*, March 6, 1882) reports a case of a scoliotic man who was paraplegic and in whom the symptoms pointed to pressure on the motor portion of the cord. The presence of a cold abscess to the left of the first lumbar spine, the pain on pressure and the fact that the paraplegia had gradually occurred led to the diagnosis of caries of the body of the vertebra. The abscess was first opened next the sinus leading to the twelfth rib at its greatest convexity. The rib was found to be carious and was resected. The vertebra had undergone cheesy degeneration, and was scooped out by a sharp spoon. The patient died thirty-seven days after the operation. On the autopsy, dry pleurisy and miliary pulmonary tuberculosis were found. The cases reported by Spencer (*New England Medical Monthly*), and that reported by GAILLARD'S MEDICAL JOURNAL for March, seem to show the feasibility of this operation in similar cases to Israel's case.—*Canada Medical Review.*

Unusual hailstorms are reported from various parts of the South, the hail stones being of exceptionally large size. In one or two instances men have been killed by the pelting blocks of ice "as large as a man's fist." Still worse storms have been reported in Europe. The Sicilian *Gazette* tells of one which wrecked a village. When it was over, it was found that eleven persons had lost their lives, their bodies being found disfigured beyond recognition; horses and cattle were killed, and many buildings so badly injured that they had to be torn down.

A SINGULAR LEGACY.—A patient, who had benefited by M. Ollier's subperiosteal method, bequeathed to him his elbow-joint as a token of gratitude. The legacy proved a valuable one for pathological science, since the physiological process of renewal of the tissues could be followed almost step by step.—*Brit. Med. Journal*, May 13, 1882.

JABORANDI IN PRURITUS.—Dr. L. Putzel (*Journal of Nervous and Mental Diseases*, April, 1882,) reports that a case of pruritus and urticaria which had obstinately resisted all previous treatment, yielded to five minims thrice daily, of fluid extract of jaborandi. The disease always recurred when the treatment was discontinued. For many reasons, jaborandi would seem likely to be of value in such conditions.

RHUX TOXICODENDRON.—Dr. C. W. Leffers, Lubeck, West Virginia (Medical Brief, June, 1882), claims that the external use of a solution of sulphate of iron has never failed to cure the eruption produced by rhus toxicodendron.

DIABETIC ENDOCARDITIS.—M. Lecorché points out in a communication to the Academie des Sciences, that the frequent occurrence of inflammation in the course of diabetes leaves no doubt of the tendency of this affection to produce in the persons who are attacked by it an inflammatory diathesis. The inflammations are not confined to the skin, the digestive canal, the kidneys, nor the lungs; they may implicate other organs. M. Lecorché recently described to the Academy of Medicine, as one of the somewhat frequent complications of diabetes, atrophic cirrhosis of the liver. He now draws attention to endocarditis. Diabetic endocarditis, which he has observed on several occasions, appears to show itself more frequently in females than in males (in eight cases out of fourteen). He has not met with it otherwise than in the chronic condition, and only as a complication of subacute or chronic diabetes. It only appears at an advanced stage of the disease—two or three years, or even more, after its commencement. Its appearance seems to be favored less by the intensity of the glycosuria than by its long duration. It is localized at the level of the mitral orifice, and M. Lecorché has only seen it on one occasion situated at the level of the aortic orifice. It reveals its existence by a *bruit de souffle* with the first sound at the apex of the heart, and by irregularity and intermittence of the pulse. It is sometimes accompanied by atheromatous degeneration of the arteries (twice out of fourteen cases). It accelerates the progress of diabetes, and frequently brings on death, either by induccing a more or less generalized œdema, ascites, or becoming complicated with acute hepatitis. It seems to be due to the irritation which the prolonged contact of blood changed by the presence of sugar in excess produces on the lining membrane of the heart.—*Brit. Med. Jour.*

THE LOCAL APPLICATION OF CHLORAL HYDRATE IN THROAT AFFECTIONS.—In a paper published in the Detroit *Lancet*, for July, 1881, Dr. G. A. Collamore speaks of a species of sore throat, characterized by moderate swelling of the tonsils and adjacent mucous membrane, pain in deglutition, and a peculiar cherry-red or purplish-red hue of the tonsils and pharynx. On the tonsils appears spots of whitish or yellowish white color, the size of a grain of corn or less. These are composed of the aggregated secretions of the tonsillar glands, and are readily detachable, leaving the mucous surface unabraded. There is, moreover, a moderate, sometimes high, grade of fever, and decided prostration of the system. The disease is properly a follicular tonsillitis, though the inflammation is not confined to the tonsillar surfaces, but affects the palatine and pharyngeal mucous membrane also, and is liable to be mistaken for and called diphtheria.

In these cases, combined with systematic remedies, chloral acts in a kindly manner as a local application, either as a gargle, a grain or two to the ounce of water, frequently used, or in a stronger solution applied with a camel's hair brush or a swab. A small quantity of the gargle may be swallowed after each gargling, in order to apply it to the lower pharynx. Employed in this way the author has found chloral a very valuable remedy.—*Med. and Surg. Reporter.*

THE HYPODERMIC ADMINISTRATION OF AMYL-NITRITE.—J. J. FREDERICK BARNES writes as follows to the *British Medical Journal:*

I have administered amyl-nitrite hypodermically thirty or more times during the past eighteen months. In all cases, a ten-per-cent. solution in rectified spirit was used. In no case did any untoward inflammatory or suppurative symptoms occur afterwards. The action of the drug was immediate in every case, the subjective phenomena being like those experienced when using the ordinary methods of administration. The spirit solution appears to be an excellent preparation for use, as a small quantity kept in an ordinary stoppered bottle for some months retains its full efficiency at the present time. The dose usually administered has been ten minims of the solution, equal to one minim of amyl-nitrite. In lumbago, where the patient as seen at the commencement of the attack and the disease is not of long standing, the drug given in this manner instantly relieves the symptoms; a patient who is unable, previously to its administration, to bend the trunk without the most exquisite pain, five minutes afterwards can do so quite readily. In a case of paraffin-poisoning, where the patient was in a state of collapse and almost pulseless, one administration (inhalation having been ineffectually tried) brought on an immediate resumption of cardiac function, the man speedily recovering. Its action in this case would, I apprehend, be due to the relief momentarily given to the congested centres by the peripheral hyperæmia induced. In another case, one of duodenal colic, the patient was found rolling on the floor from the acuteness of the pain; when, on injecting fifteen minims of the spirit solution, the pain disappeared as if by magic, and the patient was at once able to resume his ordinary position. The value of this drug by ordinary methods of administration has already abundantly demonstrated how great a boon the discovery of Dr. Lauder Brunton is in the hands of the profession, notably in cardiac angina; and I feel confident that its utility may be still further enhanced by giving it as here recommended, hypodermically.

THE CASTOR-OIL PLANT AS A FLY-KILLER.—Observations made by M. Rafford, a member of the Société d'Horticulture at Limoges, show that, a castor-oil plant having been placed in a room infected with flies, they disappeared, as by enchantment. Wishing to find the cause, he soon found under the castor-oil plant a number of dead flies, and a large number of bodies had remained clinging to the under-surface of the leaves. It would therefore, appear, that the leaves of the castor-oil plant give out an essential oil, or some toxic principle which possesses very strong insecticide qualities. Castor-oil plants are in France very much used as ornamental plants in rooms, and they resist very well variations of atmosphere and temperature. As the castor-oil plant is very much grown and cultivated in all gardens, the *Journal d'Agriculture* points out that it would be worth while to try decoctions of the leaves to destroy the green flies and other insects which in summer are so destructive to plants and fruit-trees. Anyhow, M. Rafford's observations merit that trial should be made of the properties of the castor-oil plant both for the destruction of flies in dwellings and of other troublesome insects. —*Brit. Med. Journal.*

In all progress, the exclusive systems in medicine have had no share whatever. So far as any true advancement is concerned they have been entirely barren. Not a single oasis relieves the dreariness of the view. Not a single flower of science has blossomed in their uncongenial soil. Not a single origial contribution has been made by them to anatomy, physiology, histology, chemistry, pathology, etiology, and public hygiene. Nor is it known that any one belonging to the ranks of these irregulars has ever achieved distinction in the fruitful field of other sciences in which the cultivators of scientific medicine have won so much glory, and have performed such noble exploits. The names of Linnæus, Berzelius, Draper, Nott, and Leidy, and many others, form brilliant constellations which shall continue to illuminate the firmament of science after homœopathy and kindred delusions shall have been swept away by the relentless winds of oblivion.—*Octerlony.*

Launching a Ship by Means of Electricity.—In launching the English turret ship Colossus, March 21st, electricity was employed by means of an ingenious contrivance which connected the dog shores with a large magnet; and in a similar manner the christening was performed. Simultaneously with the breaking of the bottle over the ship's nose a musical instrument inside an ornamented box was set at work, and "Rule Britannia" was the result. By this time the course was reported clear, and, as the ship gave evidence of anxiety to leave the cradle, it was deemed advisable, though ten minutes before time, to let her go. The pressure of the launching button was followed by a heavy thud. The weight had fallen and the dog shores had been knocked away. The ship moved instantly, and the huge mass of 4,420 tons—the heaviest ever launched from the Portsmouth yard—glided gracefully down the inclined plane into the harbor, amid the bands and the enthusiastic cheers of the multitude.

Resection of a Vertebral Body.—Dr. J. Israel (Berliner Klinische Wochenschrift, March 6, 1882), reports a case of a scoliotic man who was paraplegic and in whom the symptoms pointed to pressure on the motor portion of the cord. The presence of a cold abscess to the left of the first lumbar spine, the pain on pressure, and the fact that the paraplegia had gradually occurred, led to the diagnosis of caries of the body of the vertebra. The abscess was first opened next the sinus leading to the twelfth rib at its greatest convexity. The rib was found to be carious and was resected. The vertebra had undergone cheesy degeneration, and was scooped out by a sharp spoon. The patient died thirty-seven days after the operation. On the autopsy, dry pleurisy and miliary pulmonary tuberculosis were found. The cases reported by Spencer (*New England Medical Monthly*), and that reported by Gaillard's Medical Journal for March seem to show the feasibility of this operation in similar cases, to Israel's case.

The following story is told of the late Sir Robert Christison, the eminent toxicologist: "His wife was in her last illness. She was gone to the country for a month, and her husband heard her give orders that a piece of worsted work, which she had finished, should be grounded and made up into an ottoman and ready in the drawing room on her return. A few days before her expected arrival he asked if it was completed; it had been totally forgotten. He said nothing but getting possession of the piece, he sat up for two or three nights and grounded it with his own hand, had it made up, and set his wife down on it, as she had wished."

WOUNDS OF THE HEART.—Dr. J. W. Stone, Cottonwood Falls, Kansas (Kansas *Medical Index* May, 1882), reports a case of a man who was shot through the walls of the left auricle, the ball remaining in the cavity of the right auricle till the man's death, seventy-two hours after the injury.

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MEDICAL NEWS.

"Nulla dies sine linea."

ASSISTANT SURGEON C. CRANE, U. S. A., so long and ably connected with the office of the Surgeon General, at Washington, D. C., and occupying for many years the position of Assistant Surgeon General has been recommended to the U. S. Senate, by the President, as the successor of Surgeon General J. K. Barnes.——The Yellow Fever has appeared at New Orleans, Pensacola and Philadelphia; the cases are all isolated and the disease is under full control. This fever is epidemic at Havana and all riparian and maritime cities should be on their guard——THE SURGEON OF PRESIDENT GARFIELD was chosen by Secretaries Lincoln and Hunt; that surgeon was Dr. D. W. Bliss. All charges and statements to the contrary are unjust and untrue. This Journal has been among the number to publish statements reflecting upon Dr. Bliss in this relation and it hastens to make this public amende.——THE MEDICAL SOCIETIES in this state are rapidly repudiating and condemning the State Society's action in regard to the code of ethics: the Buffalo Medical Society; The Saratoga Co. Society; The Erie Co. Society; The Niagara Co. Society are powerful and energetic in the denunciation of the "new code."——Dr. Thomas B. Peacock (of London) F. R. C. P. died of paralysis June 1st.——Dr. James Spence, F. R. C. S. E. died in Edinburgh, June 6th.——PHILANTHROPIC INCONSISTENCY.—Under the head of cruelty to animals, an exchange prints the recent bequests in a Philadelphia will, leaving $1000 to the Society for the Prevention of Cruelty to Animals, and $15,000 to the Managers of a Women's Hospital, on condition that they forever keep out all unfortunate girls from the obstetrical wards——Mr. Ray Lankester has been re-appointed Professor of Zoology and Comparative Anatomy at University College, London.——NEW YORK OPINIONS OF THE NEW YORK CODE.—Drs. Alonzo Clark, F. H. Hamilton, and N. Bozemann, have been interviewed by the *New York Tribune* in reference to the New York Code. They approve the action of the American Medical Association in excluding the delegates from the New York State Medical Society, and express the belief that at the next meeting of the State Society there will be a full representation of the profession of the State, and that the new Code will be repudiated by the Society.——THE STATE MEDICAL SOCIETY of Arkansas, for its last banquet issued some very original programmes, devices, and schedule of toasts, etc. The *menu* was printed on white ribbon and "the toasts" on a board figure representing a surgeon's saw. The work was all well done and reflects great credit on all concerned. The bill of fare is in Latin, and the orthography is often as original as is the kind of a spotless ribbon, on which it is printed—emblematic of the body in whose name it appears;

sans peur et sans reproche—so mote it be. —PHILADELPHIA SEWERAGE is represented, by Col. George E. Waring, to be very bad.——MEDICAL WOMEN.—The Philadelphia County Medical Society has again refused to admit medical women to membership. The Massachusetts State Medical Society has done the same. In the case of the latter, the society as a body voted for admission, but the council, which has authority in the matter, voted against it. In the case of the Philadelphia society the applications for membership were endorsed by the Board of Censors, but the candidates were rejected by the society.——The *Record's* "influential men in every part of the country," who wrote letters containing "the heartiest endorsement of the course of the *Record* in its advocacy of freedom in consultations," did not put in an appearance at St. Paul.——THE NEW CODE OF NEW YORK is repudiated by Drs. A. Flint, F. H. Hamilton, Willard Parker, Alonzo Clark, Louis Elsberg, L. A. Sayre, and many others. Dr. W. A. Hammond says of it: "I think it illogical, absurd, sophistical, unsound, unwarranted, untenable, inconclusive, fallacious, evasive, irrelevant, heretical, unreasonable, unscientific, narrow-minded, visionary and futile."——The eminent surgeon, Baron von Langenbeck, has tendered his resignation of the professorship of surgery in the University of Berlin, which he has held for many years, with advantage to surgical science and honor to himself. His resignation has been accepted by the Prussian government, and instructions have been given to take the necessary steps for the appointment of a successor, to enter on the duties of the chair in October.——FIRST-CLASS NONSENSE.—Dr. Riboli who made a post-mortem examination of Garibaldi, writes as follows: "Garibaldi's head presents a group of phenomena rare if not without precedent; the perfect harmony of all the organs and the mathematical resultant of their *ensemble* yields specially—abnegation of self, paramount and complete; prudence and cold blood; natural austerity of habits; almost continual pensiveness; eloquence grave and controlled, and loyalty dominating all."——THE death is announced of Professor Carl Hueter, of Greifswald, from Bright's disease, at the age of forty-four.——DR. J. S. BILLINGS has accepted the invitation to deliver the annual oration before the Medical and Surgical Faculty of Maryland in April, 1883.—FRANKLIN J. MOSES, ex-Governor of South Carolina, has been sentenced to the penitentiary for six months for obtaining money under false pretences, with the assumed name of Dr. F. L. Stiner, from Dr. Nathan Bozeman. He was also awaiting trial at the time under two other similar indictments.——AVENA SATIVA IN OPIOPHAGISM.—After an extended trial of avena sativa as a cure for opiophagism, Dr. Kane, (*Journal of Stimulants and Narcotics*, June, 1882), has found that it not only does not produce any permanent beneficial results, but also that it does not in any way modify the symptoms of abstinence In certain neuroses in which it has been tried it has totally failed to prove itself of service.——AMERICAN JOURNAL OF STIMULANTS AND NARCOTICS.—The first number of this new monthly journal is just at hand, and presents a good appearance. It contains original articles by Drs. W. A. Hammond and Beard, besides a number of editorials, reviews and notes relating to the various stimulants and narcotics, of great value from a practical standpoint. The *Journal* is edited by Dr. H. H. Kane, of the De Quincy Home. The subscription price is two dollars per annum——PHOSPHORESCENT.—An old lady, who has several unmarried daughters, feeds them on a fish diet, because it is rich in phosphorus, and phosphorus is the essential thing in making matches.—*Students' Journal.*—THE *Microscope*, Detroit, Mich., gives in its last issue a valuable article on "How to Stain and Mount Nucleated Blood Corpuscles." Working microscopists have long sought after a double staining process for blood corpuscles and Professor Moore is the first to succeed. The colored lithograph shows how successful the method is. Subscribers who work with the microscope will be pleased to learn this method.——ON the authority of Brown-Séquard the frequent induction of hypnotism is apt to produce nervous diseases in the subject.——CHICAGO BRUNETTES.—It is rumored that the dark complexion of the Chicago ladies is due to the wide use of nitrate of silver by a popular gynecologist.—*Peoria Medical Monthly.*——THE London Pathological Society is so overrun with specimens that special meetings are necessary to consider them.——GAS FROM CASTOR-OIL.—One of the latest discoveries is in the production of illuminating gas from castor-oil. It is produced by heating the oil sufficiently for decomposition, this point being favorable for its generation.——THERE are now six medical journals published in the Japanese language in the cities of Japan.——THE *American Journal of Stimulants and Narcotics* is the latest journalistic venture. It is a monthly magazine, published in New York, and "devoted to a scientific study of acute and chronic poisoning by alcoholic and narcotic agents." Dr. H. H. Kane, so well and favorably known, is the editor. Welcome.——PROF. HUETER, of Greifswald, succumbed to renal disease on the 14th of May, aged 44. His latest work, *Grundriss der Chirurgie,* is only just completed. He was editor of the *Deutsche Zeitschrift fur Chirurgie,* and the author of several articles in Billroth's great *Handbuch der Chirurgie.*——THE NEW YORK COUNTY MEDICAL SOCIETIES AND THE NEW YORK CODE.—The Chenango, Warren, Schoharie, Oswego, Montgomery, Westchester, Genesee, and Wyoming County Medical Societies are the latest to formally condemn the new Code.——THE NATIONAL BOARD OF HEALTH.—At the annual meeting of the National Board, held June 23d, the following officers were elected for the ensuing year: *President.*—Dr. James L. Cabell, of Virginia. *Vice-President.*—Dr. Stephen Smith, of New York. *Secretary.*—Dr. Thomas J. Turner, Medical Director, U. S. N. *Executive Committee.*—The above named officers, with Samuel F. Phillips, Esq., Solicitor-General; Dr. John S. Billings, Surgeon, U. S. A.; and Dr. P. H. Bailhache, U. S. M. H. S.——GEORGIA MEDICAL COLLEGE.—Drs. Lewis D. Ford, and L. A. Dugas, two of the founders of the college, and for over fifty years members of its Faculty, have resigned. —— A NEW monthly medical journal will be started in Baltimore with Dr. Geo. H. Rohé as editor.——EFFECT ON WOMEN OF IMPERFECT SEXUAL HYGIENE.—Dr. Chas. Fayette, Taylor (*American Jour. of Obstet. and Diseases of Women and Children*) argues that many of the invalids among the unmarried women, especially those of the highest and most refined class, have been ruined in health and often in mind, by *disuse* of the sexual organs. He states that in many instances the subjects are entirely ignorant of the cause and even of the nature of the erotic sensations—all such ideas and influences having been, by education and training, methodically repressed from infancy. Many form the habit of masturbation, and are thus undermined in health. [Note. Is not Dr. Taylor seriously incorrect ?].——PROGRESS OF HOMŒOPATHY.—At the recent meeting of the American Institute of Homœopathy, at Indianapolis, Dr. Talbot, of Boston, read a report showing that there are 7,000 homœopathic physicians and 278 institutions in the United States; 4 national societies report 1,067 members; 26 State societies, 1,783 members; 103 local societies, of which 66 report 2,355 members; 18 clubs, of which 7 report 79 members; 23 general hospitals, of which 18 report 1,268 beds; 15 of these hospitals reported having treated last year 6,675 patients. The cost and value of 11 of these is $770,500. Of 30 special hospitals 15 report 859 beds, and 9 of them treated last year 10,609 patients. The cost and values of these hospitals are $1,106,000. Of 29 dispensatories, 27 reported having treated last year 1,469 patients. To these had been furnished 256,589 prescriptions. Twelve medical colleges have had 1,267 students and graduated 412 physicians this year, and 5,680 since they were founded.——PAWLIK has proposed an ingenious method of exploring the ureters in the female, which, in certain cases, may prove very useful. Placing the patient in the knee-elbow posture, the vesical triangle is more or less clearly defined on the anterior wall of the vagina, its apex being marked by a slight elevation, and its sides and base respectively by furrows and ridges. The furrows indicate the direction in which the instrument is to be passed, and, by a little searching, the orifice of the ureter may be found and catheterized even beyond the brim of the pelvis. Not only the distance to which the instrument can be introduced is an assurance that we are in the ureter and not the bladder, but we have two others. If in the bladder, the cavity of that viscus allows of free movement, which is not possible if the instrument be caught in the orifice of the ureter, and if the bladder be injected with milk or other colored fluid, the escape of milk or of clear urine by the catheter will give information as to the position of the catheter.——THE NEW SURGEON-GENERAL OF THE ARMY.—Dr. Crane is the son of an army officer, and was born in July, 1825. His appointment as Assistant-Surgeon in the army dates from February, 1848. He first went with troops to Mexico, and at the close of that war was sent to Florida, where he served in the Seminole war. In 1852 he was transferred to the Pacific coast, where he was stationed until 1856, when he was placed on duty in New York, where he reremained until the end of 1861. He then became Medical Director in the Department of the South, and so continued until the fall of 1863, when he was placed on duty in the Surgeon-General's office at Washington. At the close of the war, in the organization of the Medical Department, he was made Assistant Surgeon-General, which office he has held to the present time, discharging its duties to the satisfaction of all concerned.–*News.*——EFFECTS OF TOO MUCH BRAIN WORK FOR CHILDREN.—On April 28, Dr. Richardson, F. R. S., delivered a lecture on "National Necessities as the Bases of Natural Education," before the Society of Arts, brought forward, writes F. C. S., the following extract, which happened to be a report of the chairman of the evening, Mr. Edwin Chadwick, C. B., to the British Association in 1860, to show what an evil effect too much brain work, without a proportional amount of industrial occupation to support it, has upon young children: "In one large establishment, containing about six hundred children, half girls and half boys, the means of industrial occupation were gained for the girls before any were obtained for the boys. The girls were therefore put upon half time tuitions; that is to say, their time of book instruction was reduced from thirty-six hours to eighteen per week, given on the three alternate days of their industrial occupation, the boys remaining at full school time of thirty-six hours per week, the teaching being the same, on the same system, and by the same teachers, the same school attendance in weeks and years in both cases. On the periodical examination of the school, surprise was expressed by the inspectors at finding how much more alert, mentally, the girls were than the boys, and in advance in book attainments. Subsequently industrial occupation was found for the boys, when the time of book instruction was reduced from thirty-six hours a week to eighteen; and after a while, the boys were proved, upon examination, to have obtained their previous relative position, which was in advance of the girls."——PROF. JOSEPH LEIDY.—The friends of this eminent physician propose to raise a fund of $100,000, the interest of which shall be paid him during his lifetime, and thereafter to be applied to the maintenance of the "Joseph Leidy Chair of Anatomy" in the University of Pennsylvania. Dr. William Pepper will receive subscriptions, 1811 Spruce street, Philadelphia, Pa.——THE GROSS PROFESSORSHIP.—The Alumni of Jefferson Medical College propose to endow a Chair of Pathological Anatomy in that

College in honor of Dr. Samuel D. Gross. The *Medical Times*, June 17th, says: "There can be no doubt that this endowment fund will soon be subscribed and offered to the Trustees of the College." Such an enterprise, we are sure, will succeed. ——Mr. Charles G. Francklyn, in whose sea-shore cottage President Garfield died, has just founded and endowed a sanitarium for poor children at Elberon, in memory of his young daughter, Gladys Francklyn, who died recently in Paris.——Drs. Fordyce Barker, Austin Flint and John G. Adams, have been appointed delegates from the New York Academy of Medicine to the International Congress of Hygiene, which meets in Geneva, Switzerland, from the 4th to the 9th of September.——Surgeon-General Barnes has been honorably placed on the retired Army list by reason of long service. Assistant-Surgeon General Crane has been promoted to the vacancy. General Crane merited the promotion and was fortunately in the line. The action of the President will receive the endorsement of the whole medical profession.——Dr. T. Gaillard Thomas, much to the gratification of the friends of the school, has been persuaded to accept his former position of clinical professor of diseases of women in the College of Physicians and Surgeons. When Dr. Munde was appointed lecturer on this branch, after Dr. Thomas's resignation, it was only for one year, and that time has now expired. ——ALUMNI ASSOCIATION, UNIVERSITY OF LOUISVILLE, MEDICAL DEPARTMENT.—The members of this Association will be glad to learn that Dr. Nathan Bozeman, of New York city (class of 1848), will deliver the address at the next regular alumni meeting, which will be held some time in February, 1883, at Louisville.——Senator Cameron, of Pennsylvania, has introduced in the Senate a joint resolution that it shall be a misdemeanor punishable by a fine of $500 and dismissal from office for officers of the United States Government, civil, military, or naval, to make discrimination in favor of or against any school of medical practice, or its legal diplomas or its duly and legally graduated members, in the examination and appointment of candidates to medical service in any of the departments of the Government. ——Dr. Burch, the Director General of the medical department of the Russian navy, has been placed on trial for receiving bribes for promotions given to subordinates. Eighty-six surgeons testified that Dr. Burch had not for many years made a promotion without such a payment; in one instance the sum paid being 3,100 rubles.——The officers of the American Medical College Association for the ensuing year are: President—W. W. Seely, M.D.; vice-president—Deering J. Roberts, M.D.; secretary and treasurer—Leartus Connor, M.D. The next meeting will be held in Nashville, Tenn., at such date as shall be fixed by the president.——CONTROLLING QUININE.—A great combination of the quinine manufacturers abroad has been formed, for the purpose, it is stated, of controlling the market of the United States.——An effort to get Prof. Billroth at Berlin is said to be on foot. Prof. Langenbeck will soon retire from the Surgical Chair at that city. He desires to see his place filled by the one whom he considers his most brilliant pupil. Prof. Billroth is therefore selected. It is very doubtful, however, that any such change can be made.——ARTIFICIAL QUININE.—M. E. J. Maumene claims to have achieved the artificial synthesis of quinine, and has deposited a sealed packet describing his process with the French Academy, pending physiological tests of its genuineness. Much incredulity exists regarding his claims.——THE APPROPRIATION FOR THE NATIONAL BOARD OF HEALTH.—The annual appropriation for the National Board of Health was cut down in the Senate to such a small sum that, if passed by the House of Representatives the present activity of the Board will be seriously interfered with, and several of its undertakings abandoned.——PROF. CARL SCHROEDER, the Director of the Gynæcological Clinic of Berlin, has been decorated by the King of Prussia with the Cross of the third class of the Order of the Red Eagle.——PROF. NOTHNAGEL, of Jena, has been selected to fill the chair of Clinical Medicine and of Special Medical Pathology and Therapeutice at Vienna, made vacent by the death of Duchek.——DR. DUJARDIN-BEAUMETZ has received the Chateau villard Prize of 1500 francs for his "*Lecons de Cliniqu Therapeutique.*" —— CULTIVATION OF CINCHONA IN THE UNITED STATES.—Hon. S. J. Randall introduced the following resolution into the House of Representatives. It was unanimously adopted: "*Resolved*, That the Commissioner of Agriculture be requested to inform this House whether any portion of the United States is adapted to the growth of cinchona."——DR. T. F. RUMBOLD, of St. Louis, says that Kennedy's Compound Extract Pinus Canadensis is the only astringent he uses in the throat. He considers it a valuable preparation. —— THE UNIVERSITY OF LOUISVILLE.—The Board of Trustees of the University of Louisville has elected Dr. John A. Octerlony to the Chair of Materia Medica, Therapeutics, and Clinical Medicine in the medical department of the University. Dr. L. S. McMurtry has been elected Demonstrator of Anatomy in the same institution.——PUT UP THE HORSE AND BUGGY—A late improvement makes the tricycle a possibility. One of the first uses M. Faure made of the storage battery was to propel such a machine at ten miles an hour. With improvements sure to come, we see no reason why the electric tricycle should not become a favorite means of travel, at least, where streets and roads are good.——VANILLA FROM OATS.—It is well known that the German chemists, Thiemann and Harmann, some time ago succeeded in preparing artificial vanilline from the sap of pine trees. A French chemist, M. Eugene Serullat, has discovered a way of producing the same compound from common oats. The hull of the oats contains a principle which is very soluble in boiling water, and to which M. Serullat has given the name of Aveneine. This principle is isolated from the residues of manufacture of oat meal, is oxydized, and becomes converted into the characteristic perfume of vanilla. Whether it has all the properties of vanilline, as made from the bean and the sap of the pine, remains to be determined.——A GARIBALDI MEMORIAL HOSPITAL.—Efforts are making to secure money for the erection of a Garibaldi Memorial Hospital, at Clifton, S. I., where he used to live.——It is announced that the French Minister of Marine has placed at the disposition of M. Alphonse Milne-Edwards the vessel, Le Travailleur, for a dredging expedition in the Bay of Biscay, as far as the Canary Islands. The operations, which are to be made with a view to studying the fauna and flora in deep sea, will take place during July and August.——A large canoe in excellent condition has been found near Bex, 4,000 feet above the sea level and nearly 3,000 feet above the valley of the Rhone. No Lacustrine relics have ever before been found in Switzerland at such an elevation.——The *Medical Gazette* says that Sir Henry Thompson has become a convert to the views of Dr. F. N. Otis in regard to the calibre of the normal urethra, after having strongly opposed them when first announced. —— EPIDEMIC WHOOPING COUGH IN LONDON.—During the first four months of the current year more than 2,500 children were carried off by whooping cough in London. The epidemic began toward the end of last year, and has since prevailed with exceptional fatality.——THE CITY'S POPULATION.—C. W. Seaton, superintendent of the census of 1880, sent to Dr. Nagle, Register of Vital Statistics, a table containing interesting facts concerning the population of this cosmopolitan city. The entire population at the time the census was made appears to have been 1,206,299. Dividing the population into native, foreign and colored we have:—Natives (5 years and under)—males, 80,739; females, 79,875. Foreign—males, 2,318; females, 2,384. Colored—males, 1,-

012; females, 962. Between 5 and 20 years:—Native—males, 138,399. Foreign—males, 18,729; females, 22,016. Colored—males, 1,722; females, 2,011. Ninety years and over—Native—males, 18; females, 48. Foreign—males, 63; females, 200. Colored—male, 1; females, 16. Total of all ages—Native—males, 349,158; females, 359,158. Foreign—males, 231,451; females, 245,707. Colored—males, 9,536; females, 10,920. The oldest white man in the city is 98 years of age, and there are three women of like ages and one over 100 years. There are six men of foreign birth 98 years old and fourteen women, one of whom is over 100 years, residing here. The oldest colored man in the city is 94 years, and there are nine colored women who claim to be 100 and over.——Suspension of the National Board of Health Bulletin.—Owing to the failure of Congress to provide a sufficient appropriation for the continuance of the duties of the National Board of Health the publication of the Journal which hitherto, for three years, has been issued weekly by the Board was suspended July 1st.——Sir Erasmus Wilson.—A few days since Sir W. Jenner, Dr. Wilson Fox, and Dr. R. Liveing held a consultation respecting Sir Erasmus Wilson's health. They decided that he should pass the summer months at Westgate-on-Sea.——The Societe contre l'Abus du Tabac offers a prize for the best essay on the question, "Do there exist characteristic symptoms sufficient to warrant the conclusion that amaurosis or defect of sight is caused by the excessive use of tobacco?" The prize consists of books to the value of 200 francs and a bronze medal.——Digital Exploration of the Bladder.—Sir Henry Thompson's recent proposal to examine, by means of the finger, obscure and chronic disease of the bladder, hitherto inexplicable by sounding, is yielding valuable results. A patient had suffered severely from cystitis and bleeding during three years, and without ascertained cause, was sent to Sir Henry from the country about three month ago, when the bladder was explored by the finger, after dilatation of the urethra, the patient being a lady. The outline of a considerable polypoid growth from the back of the bladder was easily defined and at once removed by blunt forceps. The patient is making a rapid recovery. There has been no cystitis or since, in spite of exercise, walking and driving, daily.——Dr. Patrick Heron Watson has been appointed one of the Surgeons in Ordinary to the Queen in Scotland in the room of Professor Spence, deceased.——The American Dermatological Association will hold its next annual session at Newport, at the Ocean House, on August 30 and 31 and September 1. A good programme is promised.——The practice of medical men taking part in such a local discussions as are now raised on the subject of experiments on animals, is considerably extending. Recently, at Richmond, Eng., in a largely attended meeting, at which leading members of the Antivivisectionist Society took part, the arguments in favor of the use of experiments on animals as a method of research were ably advocated, and the feeling of the meeting was so completely against the antivivisectionists who had summoned it, that they did not venture to put any resolution. At a large meeting of the St. Paul's Mutual Improvement Association, at Sheffield, in which Mr. R. J. Pye-Smith took part, a vote being taken, the antivivisectionists were beaten by a large majority.——The first excursion of the season of the Floating Hospital of St. John's Guild for the benefit of sick children took place on the 6th of July, the trip being down the bay to the sea-side nursery of the Guild at Cedar Grove, about half a mile below New Dorp, Staten Island. These excursions will be continued every Tuesday, Thursday and Saturday during the summer, and on the alternate days of the week mothers can secure the admission of their sick children to the nursery by making application to the examining physician of the Guild, Dr. David Phillips, at the office of the society. Last year 35,000 excursion tickets were given out, and the average number of mothers and children on each trip was from 1,000 to 1,200. Since 1875, when the scheme originated, 252 excursions have been given, and 197,120 poor women and children taken upon them. On these excursions milk and other appropriate food are served out to the children at 10 a. m. and 3 p. m., and at noon their mothers are given a substantial meal.——AMERICAN ACADEMY OF MEDICINE.—ITS WESTERN MEMBERSHIP.—Of the two hundred members of the American Academy of Medicine one hundred and ninety-one live in the East.——PROFESSOR BILLROTH.—Professor Billroth, who is a native of Rugen, has recently received an invitation to take the place of his teacher, Professor Langenbeck, in Berlin, but preferred to remain in connection with the University of Vienna, in which he has held a distinguished position for the last fifteen years. The students thereupon resolved to thank the great surgeon for determining to stay with them. On the morning of June 22nd an address was presented to him in the hall of the Academy of Sciences, where most of the professors of the University and many men of science had assembled, while the body of the hall was filled with students in their academic costume. The address was signed by a large number of Billroth's pupils, the name of Duke Karl Theodor of Bavaria heading the list. Dr. Billroth, who was received with great applause, said he considered himself as belonging to Austria and the University of Vienna. In the evening a great torchlight serenade was held in his honor. Some thousands of students, with torches and colored lamps, marched with the old University flag and a band of music to the street where the professor lives. The German students song, "Gaudeamus igitur," was sung by thousands before the professor's house; and afterwards a hymn, specially composed for the occasion. Dr. Billroth thanked the gathering in a few warm words; and, after some more singing and cheering, the students dispersed.——PERSONATION AT MEDICAL EXAMINATIONS.—It is not without reason that Mr. Macnamara directed the attention of the Council to the risk of personation at medical examinations. A case has just been heard in Dublin, before Mr. J. A. Curran, Q. C., in which a student of that city was summoned on a charge of attempting to induce a gentleman, Dr. Norris, to personate him at a Dublin examination, and offering him in the first instance £150 and afterwards £100. Dr. Norris immediately communicated with the police; hence this action. The student did not appear, but the Court issued a warrant for his arrest.

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EDITORIAL.

"Nullius addictus jurare in verba magistri."—HOR.

SIGNS OF DEATH BY DROWNING.—The following article is being extensively read, and as it contains very grave blunders, and blunders which are often made in courts of justice, a brief allusion to it will, it is hoped, be useful. The article is as follows :

"AN IMPORTANT AUTOPSY.—Professor Reese, of Philadelphia, has just made *an important discovery* touching the effects of drowning upon the human lungs. In an autopsy of the body of a woman, found floating in the Delaware River last week, it is reported by Philadelphia papers that he found no water in the lungs, nor any evidence of water having been there, nor was any found in the stomach. It is also said that the dead body bore no marks of abuse and violence, and there was nothing found in the œsophagus to indicate that water had passed the woman's lips.

"As the body was taken from the river near the wharf it is presumed that the woman jumped overboard, which leads Dr. Reese to infer that persons plunging into the water, especially from an eminence, can come to death from suffocation or shock without taking water inwardly. It is well known that by bringing together the posterior arches of the palate and pressing the root of the tongue against the palate, both the mouth and the nostrils are completely cut off from the air tubes, as is done in holding the breath. It is quite conceivable that the shock caused by sudden immersion in water under a temperature of sixty-five degrees might induce this movement, and also cause a muscular contraction of the lungs and air tubes, precluding the passage of water into the lungs of a person while drowning.

"The case investigated by Professor Reese is of great interest to the medico legal experts, and the correctness of his conclusions will be tested by other examinations of the bodies of drowned persons."

In the first place there is no evidence that this woman was ever drowned. She may have been poisoned, and there is no statement or evidence that she was not. She may have fainted *in transitu*, if she ever endeavored to drown herself. She may have fallen upon her head and the shock have interrupted respiration. She may have fallen flat upon the anterior surface of her body and this shock could have interrupted respiration. She may have been murdered in a dozen different ways, without any evidence of abuse or violence being found upon her body. There is no evidence whatever of the fact (gratuitously assumed) that the water in which the body was found caused the death of this woman

But if Dr. Reese had proved, by some evidence, that the woman had been drowned, the mere fact of there being no water in the lungs, or pleural cavities, could not be regarded as anything new; far less could it be claimed as "a discovery." It has often happened that after suicide by unquestionable drowning, no water was found in the lungs or in the lung cavities and tubes. No one could go before a court of justice and claim that absence of water in the lungs proved that there was no drowning, without being ridiculed.

If Dr. Reese claims, as is said, "that persons plunging into the water, especially from an eminence, can come to death from suffocation or shock without taking water inwardly," he only claims what is fully established as a fact and very well known. There is no "discovery" in the case and it is doubtful whether he could have made such a blunder as to claim as "a discovery" what is and has long been a demonstrable fact.

Absence of water in the lungs has often been claimed as proof of the fact that the dead was not destroyed by drowning. This is a mischievous error and one which can not be too well known. The presence of water in the lungs and pleural cavities proves that drowning was the cause of the death; but the absence of water does not prove the contrary. It is to be hoped that physicians when placed before the Public will not so injure themselves and their Profession as to forget these simple facts.

ASSOCIATION OF AMERICAN MEDICAL EDITORS.—When this Body was organized in New Orleans, May, 1869, it was heartily supported by this journal; but at the very first meeting it was found that its object was not to improve medical journals, and so benefit their readers, but simply to glorify a few officers. It has dragged its useless life onward since that time, and nothing that it has ever done has been of sufficient importance to be made known outside of the little room in which five or six editors have publicly met. At the last meeting at St. Paul, both the President, who was to read a little speech, and the Secretary, who was to read a little report, were absent, and as these little proceedings were all that were expected or possible at that little meeting, some wise man proposed to adjourn *sine die*, but this was defeated, and Dr. N. S. Davis was elected President. As this little Body always meets where the American Medical Association meets, it will certainly secure by this election a presiding officer. This is the latest if not the last chapter in the proceedings of the Medical Journal Association, and it is equal to any recorded.

GUITEAU.—This unfortunate creature has been executed. At the *post mortem* every organ was examined carefully. For what reason all of these organs were examined no one can tell.

The brain has been superficially examined. So far no evidence of disease has been found.

Of course, abnormality of brain structure is no evidence that there was abnormality of function, or "insanity," nor would normality of structure prove that there could not have been abnormality of function, or "insanity." Nothing in dispute could be proved by the *post mortem*, and this examination of the brain for evidences of "insanity" is about as useless as the examination of the other organs was senseless.

THE AUTOPSY OF GUITEAU.—As the Profession will always be glad to learn and to preserve the *post-mortem* facts in regard to this remarkable and historical criminal, a great portion of the editorial space is surrendered for this purpose. The report is copied from the New York *Herald* of July 7.

REPORT.

The following physicians were present:—Dr. Noble Young, physician to the jail; Dr. A. McWilliam, his assistant; Dr. C. H. Nichols, Superintendent Insane Asylum at Bloomingdale, New York; Dr. A. E. MacDonald, Superintendent Insane Asylum, New York city; Dr. W. W. Godding, Superintendent Government Insane Asylum, District of Columbia, and Drs. Witmer and Patterson, his assistants; Dr. George L. Porter, Bridgeport, Conn.; Dr. Johnston Eliot, Washington, D. C.; Dr. D. R. Hagner, Washington, D. C.; Dr. Robert Reyburn, Washington, D. C.; Dr. W. J. Morton, editor of *Journal of Nervous and Mental Diseases*, New York city; Dr. C. L. Dana, New York city; Dr. C. K. Mills Philadelphia, Pa.; Dr. D. C. Patterson, Coroner, Washington, D. C.; Dr. J. F Hartigan, Physician to Coroner; Dr. C. H. A. Kleinschmidt, Washington, D. C.; Dr. P. J. Murphy, Washington, D. C.; Dr. Z. T. Sowers, Washington, D. C.; Dr. F. B. Loring, Eye and Ear Dispensary, Washington, D. C.; Dr. D. S. Lamb, Acting Assistant Surgeon, United States Army, and Dr. J. C. McConnell, Microscopist, and Mr. Ernst Shafhirt, Anatomist, Army Medical Museum.

The custodian of the body, Rev. Dr. W. W. Hicks, having requested me to make the examination, and this request being in accordance with one previously made by Dr. Young, I had prepared the following course of procedure, with the object of securing the most exact and satisfactory results:—The external appearances of the body should first be noted; the cavities, except the spinal, should be opened and their contents examined; that after the removal of the brain, and its examination without incision, it should be transferred, properly guarded and protected, to the Army Medical Museum, where, through the courtesy of the curator, Surgeon D. L. Huntington, United States Army, it would be photographed and then a cast be taken; that its internal structure should then be observed and portions set apart for microscopical examination, and that the entire operation should be completed as far as possible the same day, to enable the physicians resident elsewhere, present by invitation, to return promptly to their homes; and that the notes should be taken in duplicate.

Shortly previous to the examination it was agreed between Rev. Dr. Hicks and the United States District Attorney, George B. Corkhill, that the charge of the removal, preservation and disposition of the brain should be vested jointly in Drs. Lamb, Sowers and Hartigan, and that the microscopical examination should be made by parties to be selected by the gentlemen making the agreement.

The examination was then conducted by me, assisted by Drs. Hartigan and Sowers and Mr. Schafhirt, and as near as possible in the order proposed. Drs. Kleinschmidt, Patterson and others took notes and Mr. Charles Trought, of the Museum, the photographs.

By reason of delays, for which neither I nor my assistants were responsible, the examination was not begun until half-past two P. M. (one hour and a half after death), in consequence of which the photographing was less successful and a cast was impracticable.

The body, which was of a faint yellowish tint, was that of a man about five feet seven inches in height, and weighed 145 pounds.

The eyes were examined by Dr. Loring, who reported that the pupils were slightly and equally dilated; the vitreous was cloudy and the fundus indistinguishable. The conjunctiva of the left eye was congested. He repeated the examination two hours later, and noticed an appearance as of transverse fracture of the lenses. A small white scar, directed obliquely downward, forward and to the left, and confined to the scalp, was observed midway between the top of the left ear and median line of the head.

There was a yellowish furrow, a few lines in width, extending around the neck in a direction downward and forward in line of rope. On dissection the sterno-cleido-mastoid muscles were found to be torn in two about half way between their points of origin and insertion. The thyro-hyoid ligament was also ruptured and the hyoid bone and thyroid cartilage widely separated. The large blood vessels were not injured; neither was there fracture nor dislocation of the vertebræ.

Skull.— The right parietal bone was slightly flattened over a space about two inches square just back of the fronto-parietal suture and to the right of the interparietal; there was a slight flattened elevation on the corresponding internal surface of the calvaria. The frontal suture was obliterated, the others quite distinct. A number of Pacchionian depressions were observed near the groove for the longitudinal sinus. In thickness the skull presented nothing remarkable.

Membranes of the brain.—The dura mater was firmly adherent to the anterior portion of the calvaria in the vicinity of the longitudinal sinus.

There were adhesions of the dura also to the base of the skull. They were quite firm and situated in the several fossæ, and most marked in the deeper parts of the fossæ, where also there were small patches, abruptly limited, of immovable arborescent congestion, with, however, no attendant thickening or pigmentation. This stagnation was again most marked in the left anterior and middle fossæ. There was no congestion of the dura except at the points just noted.

The dura and pia mater were adherent to each other and to the brain on both sides along a limited portion of the longitudinal fissure in the vicinity of Pacchionian granulations. The dura was slightly thickened along the longitudinal sinus. It was also slightly thickened and opaque along a portion of the line of the middle meningeal artery on each side. The arachnoid of the upper convexity of the brain presented in many places, where it covered the sulci, small patches of thickening and opacity; elsewhere it was normal. The pia mater was anæmic anteriorly; posteriorly there was slight hypostasis. The cerebral vessels appeared to be normal in all respects. The orbital plates were well arched and presented many conical eminences of large size. There was no roughening anywhere of the inner surface of the skull.

The brain was firm. Its weight, including the cerebrum, cerebellum, pons and medulla, and a portion of the dura, was 49½ ounces. It was slightly flattened in the region corresponding to the flattening of the parietal bone above mentioned. On section of the cerebrum there was an appearance as of slight thinning of the gray cortex; the measurements taken, however, gave depths of 1-16 to 1-8 inch in close proximity to each other. The white substance was almost absolutely anæmic. The cerebellum and island of Reil were both covered on each side.

The fissures. — The fissures generally presented a considerable depth; in many places, as in the right fissure of Rolando, amounting to seven-eighths of an inch. The right fissure of Sylvius was typical; the left was separated from the first temporal fissure by a slight bridge deeply situated. The right fissure of Rolando did not connect with the fissure of Sylvius; the left was separated only by a small bridge deeply situated. Both were separated from the longitudinal fissure. The first frontal fissure on the right side was not connected with that of Rolando, but at the posterior part was crossed by a secondary fissure. The same on the left side, except that the fissure was crossed by a small bridge near its centre. The second and third frontal fissures presented nothing remarkable. There were numerous secondary fissures. The præcentral and retrocentral fissures on each side were well defined, and were unconnected with other fissures. The interparietal fissure on each side terminated in the transverse occipital, separated only by a slight bridge. The parieto-occipital was well marked on each side. The transverse occipital fissure on the right side was ill defined; it began on the median surface and extended well outward. The first temporal fissure was well developed on the right side; on the left, was not of the usual length. Wernicke's fissure was well marked on the left side, but not confluent. The calloso-marginal fissure was double on each side, the upper of the two being probably the true one. On the right the upper one extended back to the anterior margin of the paracentral lobule; on the left, not quite so far. The lower one extended on the right side to a line about half an inch in front of the parieto-occipital fissure, from which it was separated by a small bridge; on the left side, also, by a bridge of larger size.

Orbital Surface.—On the right side were seven fissures radiating from a circular fissure surrounding a small isolated convolution; on the left side were five fissures radiating from a small shallow depression. The left collateral fissure was well defined, extending to the anterior extremity of the temporal lobe; the right was also well marked, but did not extend so far back as the other, and there was an attempt at confluence anteriorly with the temporo-occipital, a small bridge intervening. The left temporo-occipital fissure was well defined.

The Convolutions.—The following alone call for *remark:*—The ascending frontal was well defined on each side. The ascending parietal on the right side was well developed in its lower three-fourths, but narrowed in the upper fourth. On the left side the narrowing was less marked. The island of Reil presented on the right side five fissures and six straight gyri; on the t side, seven fissures and eight straight gyri. The parcentral lobule was well marked on the right side; small on the left. The accompanying drawing of the brain is from a photograph taken four hours after death.

Thorax and Abdomen.—The usual median incision was made, and the abdomen opened. There was an extravasation of blood into the right pectoralis major muscle near the second rib. The adipose layer of the abdominal section was one inch in thickness. The dome of the diaphragm extended up to the fourth rib on each side There were old pleuritic adhesions at the apex of the right lung; the upper and middle lobes were congenitally united by connective tissue. The lung was norma throughout. There were also old pleuritic adhesions of the left lung to the diaphragm and between its lobes; three small tubercle-like, pigmented patches were observed in the upper lobe. The heart weighed ten and three-quarter ounces; its muscular substance was apparently normal. There was an abundance of fat upon its anterior surface and a villous patch of old pericarditis near the apex of the left ventricle. The right ventricle contained a little blood just forming a clot. The valves were normal. The aorta was slightly atheromatous for a short distance above the valves. All of the abdominal viscera presented large accumulations of fat. They were normally situated. The liver was congested; the gall bladder contained a little bile; the spleen was lobulated and enlarged; it weighed eighteen ounces, the capsule was bluish, the substance brown; the Malpighian bodies hypertrophied; the pancreas was normal; the stomach contained food; the intestines appeared normal, were not opened, the kidneys were congested; there was a small superficial serous cyst on the right one. The bladder contained a considerable quantity of urine.

The results of the microscopic examinations will be reported hereafter.

D. S. LAMB.

ARMY MEDICAL MUSEUM,
WASHINGTON, D. C., July 4 1882,

It is doubtful if many persons of the age of Guiteau, if dying a violent death by strangulation, could present, after death, a better condition of brain, than is herein so carefully described. The condition of the blood vessèls is excellent. There is no deviation from typical brain structure. No evidence of past disease. The ventricles were normal. There is little if any histological degeneration not properly to be attributed to the period of life of the deceased. There is no evidence of acute or chronic meningeal trouble. Amyloid, fatty and atheromatous degenerations, so often found at the age of deceased, are absent. There are no changes manifest in the gray matter; as is not infrequently seen in the brains of those chronically insane. The slight adhesions of the membranes at a few isolated spots signify nothing.

Of course, it is possible that one with even so good a brain may have been insane; and again even had great histological changes been manifest, the deceased may have been sane; but these *post mortem* facts, with the evidences furnished by the trial, warrant the opinion and belief, that Guiteau was sane; was responsible; and was justly executed.

THE AMERICAN MEDICAL ASSOCIATION has determined to hold every other session at Washington, D. C. Cincinnati would have been a better place; and to hold every session there in an edifice owned by the Association, with its Library, Laboratory, etc. would be still better; it is the best place and one long advocated by this journal. Peripateticism is right enough for "shows," Punch and Judy, the circus, etc., but science needs and demands, quiet, repose, stability and fixedness.

ANTI-PYRETICS.—While physicians have been compelled to admit the truth of the demonstrable claim, that it is practicable to reduce the temperature of fevers by the administration of large doses of alcohol, quinine, salicylate salts, etc., etc., this Journal ventures the assertion that such practice has been contrary to the instincts and convictions of nine-tenths of the practical and judicious members of the Profession. It would be difficult to say why such are the instincts of the Profession, but such is none the less a fact.

It is very unwelcome to a just, generous, careful thinker to believe that wise and great medical men have for generations past been wrong in any matter, and that they had failed to administer judiciously at the bedsides of their patients. The ablest men for a century past have been most efficient in the treatment of fevers, and it is difficult to believe that such wise and broad thinkers had not used alcohol sufficiently extensively to have noted its alleged good effects, and to have adopted it if reliable as a safe method of reducing febrile temperature. Still, with all of these reflections, and instincts, and involuntary deductions in regard to the best practice of the past there are none, even the most skeptical, who have had the termerity to doubt or deny the fact that alcohol, quinine and the salicylates, when given in large quantity, do reduce the temperature of fever.

Under such circumstances, viz., with a full respect for the wisdom of the ablest practitioners of the last hundred years, and at the same time, with the conviction that the medicines named do reduce febrile temperature, practical men have been unquestionably and seriously disturbed in regard to this comparatively recent question of reducing febrile temperature by the administration of medicines.

To withdraw, by ever so little, a welcome respect for wise and able professional men, as to believe that they did not know how to treat fevers, has been very unwelcome to all but the very young, the fanatical, the egotistical and the bigoted. And yet to deny the modern claim in regard to medicinal anti-pyretics has been absolutely impossible.

With such facts, the judicious, the careful and the independent have been sorely puzzled. Those who believe that all wisdom will die with them have, it is true, not been puzzled at all, and while laughing at the teachings of those who were great before these their traducers were born, these unco-wise doctors have not only administered medicinal anti-pyretics with enthusiasm, have not only laughed at those who refused to do likewise, but have had a vague, very vague, conviction that in some manner, not very clear to themselves, they have largely aided in the discovery and propagation of the truth!! and that they are its apostles and representatives!!

To the former class recent testimony in regard to anti-pyretics will be very acceptable, while to the latter class it will he read with either skepticism or chagrin.

It would be very welcome with more space at command to give such testimony at length, but it must be sufficient at present to furnish that which is most significant and positive.

ANTI-PYRETICS.

"Hankel, of Leipsic, a pupil of Wunderlich, and one who has done his part in disseminating the anti-pyretic theories, now says he has been at last forced to admit that although anti-pyretics may lower the temperature, *they prolong the disease.*" In France, the same is asserted by Hirtz, Cobberts and others. In England, Dr. William Jenner, consulting physician to the University College Hospital, says of the antipyretic treatment: "Neither my own limited experience, nor the evidence adduced by others in its favor, has carried conviction to my mind of its advantages." And of quinine and salicylate of soda, he has been disappointed in their effects as reducers of temperature, while he has seen both occasionally do irreparable damage by disturbing the stomach and interfering with digestion. Dr. Bristow, in the *British Journal of Medical Science*, says of quinine and salicylate of soda: "I must confess that my experience of their use has not impressed me favorably."

Prof. Klebs quotes Straube, Fræntzel and others, in regard to epidemics of typhoid fever of unusual gravity, (but without much rise of temperature), and insists that so much attention to temperature is not justifiable.

Dr. Austin Flint, who has given the antipyretic treatment no small amount of attention, does not speak of it favorably, as far as his experience goes. "It neither increased nor diminished the fatality over the ordinary mode," is the most he could say; those that would die without antipyretic treatment, died with antipyretic treatment, and it neither diminished nor increased the fatality over the ordinary mode.

Such recent opinions furnish food for serious and practical reflection. What is the experience and testimony of the reader?

THE APOLLINARIS WATER.—IS IT NATURAL OR ARTIFICIAL?—A curious case has arisen in connection with this water. According to the laws of the United States, if it is a "natural water," it is entitled to admission into this country free of duty. If it is an "artificial water," it must pay duty. As the sale of this water is now very large, the difference in the decision of this question is an annual difference to the Government and to the importers of $300,000!!

The question has been referred to many experts and officials. George P. Webster, of New York, Attorney for the Treasury Department, decides the water to be artificial; so did the Attorney-General, Wayne MacVeagh; so do the chemists in charge of the Assay Office in New York; so does the Collector of the Port of New York; so do the U. S. Consuls and Agents abroad; so does Prof. B. Silliman of Yale College, and

Prof. Wolcott Gibbs of Harvard; so does Consul Bullock, who bottled some of the water at the Apollinaris Spring; and so does Carl H. Schultz and others. These parties claim that the water is artificial because it is not bottled as it comes from the spring, but is received in storage tanks, wherein the iron, which is said to interfere with the appearance, keeping and taste of the water, is precipitated; because, also, the carbonic acid gas which escapes in these tanks is *replaced* by a larger volume of gas than the water ever contains in the spring; and because chloride of sodium is added, in the proportion of ten parts in ten thousand parts of the water, which is equivalent to 58 grains to the gallon. It is thus claimed that this water is no longer "a natural water," but is manipulated and therefore "artificial," and subject to duty.

Mr. Charles J. Folger, Secretary of the Treasury, has just decided that the water is "a natural water;" is to be received free of duty, and that all duties levied hitherto are to be returned. Mr. Folger claims that the addition of salt is made simply to preserve the water, and is, so to speak, to be regarded just as the bottle used for this purpose is to be regarded; that salt is not introduced to alter the properties of the water, nor is it introduced in an amount sufficient to do this. The carbonic acid gas added to the water is, he claims, the same gas which has been obtained from the spring, and returned to the water in the bottle; that the water in the bottle, as prepared for commerce, is the same water; it contains the same gas, and in similar amount; that salt is used, as is the bottle, for preservation only; and that if iron be withdrawn, as is claimed, and denied, the water may be impoverished by so much, but is not artificially improved in composition. The water, he claims, is therefore a natural water; the identical water; even though not the same water.

Competitors in this business claim that if this water, thus manipulated, with its contents changed, both by subtraction of the iron and the addition of the salt and a percentage of gas, is to be regarded as "a natural water," that all foreign waters manipulated for transportation are to be equally free from duty. It is also claimed that if a water may have gas added to it, and salt added to it, and any matter extracted from it, such water is "manipulated," and that all manipulated water (artificial water) may be sold as "natural water;" increasing thereby very largely the profit of their manufacture.

Many will say that this is all "Much Ado About Nothing;" but it is not about nothing; the difference involved in the question is a difference of $300,000 per annum to the Government or to one house, and further the difference of decision involves the question of justice and equal rights to all. This is right.

Why the Government should enact a law which requires a natural water of any given composition to escape a tariff duty, while another water of the very same composition, that is artificially prepared, should pay a heavy tax, it is impossible to understand. Why the waters of the Epsom wells of England should be admitted free of duty, and yet a water of similar composition, but made in the laboratory, should be taxed, who can imagine? For once, at least, the Government is scriptural in its laws and rulings; for to the owner who pays least for his medicinal water it gives most, and from the owner whose medicinal water costs most, it takes most. It says virtually, in this connection, "unto every one that hath, more shall be given, and he shall have abundance, but from him that hath not shall be taken away even that which he hath."

Accepting the law, however, as it stands, the question, at present, is, who is right? Secretary Folger, who, personally, knows about as much of the chemical elements and therapeutic forces of the Apollinaris water, as he does of chemistry and the materia medica, or the scientific experts and chemical authorities to whom this question was referred? Who knows most, the Secretary of the

Treasury or the distinguished lawyers assigned to him by Government, as his counsel? Mr. Folger says that 58 grains of salt added to a gallon of Apollinaris commercial water does not render that water different from the Apollinaris water "of the spring;" that such water is still the "natural water." What would *any* juryman say to this? Mr. Folger says that this amount of salt does not change the properties of the water; but are not the physical, the chemical, and the therapeutic properties of the water thus changed? Is water thus manipulated, the same water, physically, chemically or therapeutically? What does every chemist or physician say? Is this commercial water "a natural water?"

The proprietors of the Apollinaris claim that they have improved it; that the bottled water is more acceptable than the spring water. They claim that the natural water contains iron, and that the water of commerce is entirely free from iron. They claim that their commercial water (being bottled) can be compared with the saline waters of Ems, Vichy, Carlsbad, Selters, etc. Indeed they claim that the commercial Appolinaris is "very similar" to Selters—"the world-renowned Selters." The natural Apollinaris is not; it contains no salt. They claim that their commercial water is "doubly carbonated" (contains twice as much gas as does "the natural water"), and "possesses the high proportion of carbonic acid gas belonging to the artificial Seltzer water." The additions thus made to the natural water are to the extent of two hundred and fifty per cent. of solid and gaseous mineral ingredients. As such a water, then, is not "the natural water," can it be claimed as "the natural water?" Such a question needs no answer. The whole matter is an illustration by Mr. Folger of the old truth taught by Pope:

"A little learning is a dangerous thing;
Drink deep, or taste not the Pyerian spring."

Apart from these questions, there can be no doubt but that the commercial Apollinaris water is better than the natural Apollinaris water; it is a saline water, which the original is not; it is "doubly carbonated," which the original is not; it is free of the styptic taste, the constipating effects, and cerebral complications produced by the iron in the original water. It is thus a different water, physically, chemically and therapeutically. It is a better water, and therefore not the same. Those who use it should be made to pay for it. The duty should be added to the cost, detracting thus in no respect from the profit. But that the Government should stand on record as declaring a medicinal water "a natural water," when it is absolutely changed in its physical, chemical and therapeutic properties, is a fact which cannot be too clearly indicated and condemned.

THE CONSERVATISM OF AGE.— Billroth declares: "I am no longer the bold and dauntless operator I was known to be when in Zurich; now I always ask myself this question: Would you let this operation be performed upon yourself if you were in your patient's place? As years pass by, one becomes more and more resigned; still I feel that in each succeeding year of life that destiny may yet allow me, I will be more and more affected by hearing of failures and bad results in the work of our profession."

HEREDITARY LINEAMENTS.— It was Dr. Oliver Wendell Holmes to whom, as he was waiting for a prescription, the druggist said: "That is my son, sir, sitting by you; don't you think he looks like me?" "Well, yes," replied the poet, "I think I can see some of your liniments in his face."

THE MALLEY MURDER CASE.—TRIUMPH OF MEDICAL SCIENCE.—FAILURE ON THE PART OF THE STATE AND OTHERS.—About a year ago there was found in the surf near Savin Rock, and near New Haven, the body of a beautiful young girl, Jennie Cramer. At the coroner's inquest there were sufficient causes found for suspecting that the death of this girl was due to the actions of two young men, "The Malley

Boys," with the coöperation of their paramour, Blanche Douglass, a courtesan of New York city. All of these suspected parties were held for trial for murder, but owing to some device of the State the courtesan Douglass was not tried, being held for "developments."

At this celebrated trial, recently completed, it was proved that while Jennie Cramer was an imprudent girl, there was nothing to show a previous criminality. It was proved that the Malleys, by various devices (rides, suppers, walks, etc.), to corrupt her, finally determined to introduce to her the prostitute Douglass, as a virtuous woman, and at a supper given by the Malleys, at the family residence (and while the family were absent), to so ply her with wines, and wiles, as to then effect her ruin. The prostitute Douglass feigned sickness at that supper, and as her companion, Jennie Cramer, was asked not to leave her, they both spent the night in that house; by the next morning, the victim, Jenny, ceased to be a virtuous girl.

It was proved in court that evidences of recent sexual violence were manifest at the post-mortem; that there was enough arsenic found in the body to produce death; and that there were none of the usual evidences of "death by drowning." Medical science made a clean and clear case of a most iniquitous infamy, terminating in a foul murder; but the State failed utterly to show that the Malleys were, either or both, the cause of the death. They were therefore acquitted legally, but retired covered with the just suspicion of having perpetrated all that is foul and cowardly and criminal in man!!

One would suppose that this infamous pair would gladly have slunk away, not only from the theatre of their recent shame and ruin, but from the notice of respectable men. In an old State, justly celebrated for its intellectuality, its refinement, its mental and moral culture, its social conservatism, and a well known pride in its New England morality and propriety, one would have supposed, had not such a desire to retreat from the gaze of men been the proper instinct of the Malleys, that in this community such a course, if not voluntary, would have been made involuntary with them; that they would have been repudiated universally and forced to leave a community in which they had disgraced themselves and degraded humanity. But such was not the case. This infamous pair held "a reception" at a hotel on the night of their acquittal; large numbers were invited; and, *mirabile dictu*, large numbers attended!!

A Bacchanalian revel was that!! The orgies of Ashantee cannibals drinking gore from the red skulls of their recent victims are tame in comparison; and the wild war dance of American savages around the stakes holding their captives writhing in the fatal fires, are far less infamous in cold-blooded cruelty, and in dastardly infamy. A Bacchanalian and brutal orgie!!

Did not the ghost of the murdered girl rise up, at least in imagination, to the entertainers and the entertained, to curse such bestial festivities, and the beastly crowd which enacted them? And should not the just detestation of society, of man as well as of God, blast the perpetrators and abettors of such infamies?

Such cannibal-like orgies should cover this country with remorse and shame, even if enacted in the wild fastnesses and lawless hamlets of Dakota and Idaho; in the brutal collections of adventurers in the early days of Deadwood city, and in the mining camps of Western frontiers; but what is to be said, when near the centre of New Haven, the circle of fashion, and culture and refinement, of morality and propriety, such infamies are perpetrated without social remonstrance, without legal restraint, and without clerical rebuke!! Should not such a record, such a chapter in American History, teach all that the Phariseeism which ascribes the possibilities of such iniquities to frontier barbarity, and to the atrocities so often ascribed to American slavery has yet a profitable, if a surprising and a bitter lesson to learn; that, as of old, it is better to cast out the beam in its own eye, before noisily stigmatizing the mote in the eye of its brother?

Of course such reflections are not necessarily the function, even in part, of the Medical Press, but after recording the triumphs of Medical Science in this remarkable case, it has been simply impossible to avoid placing on comparative record the failure of the law and of the pulpit; the failure of the Press and of Society; to show the conspicuous error of all Pharisees who teach that barbarism, even of the most fearful and disgusting character is to be found only on the frontiers of civilization! Amid all of these failures, the pure light of medical science has shone purely and brightly, and it is a pleasing duty of its Press to place this fact conspicuously on record.

Gun-shot Wound of the Vertabræ.—Since the fatal wound of Mr. Garfield all injuries to the spinal column, from gun-shot missiles, have a peculiar in, terest. The following report of a wound which was treated in the Glasgow (Scotland) Hospital, and reported in the *British Medical Journal*, will be read with pleasure: "There is at present in the wards, under the care of Professor George Buchanan, an interesting case of gun-shot wound of the abdomen. About three weeks ago, the patient, a young man aged 26, was accidentally shot by a companion, while examining some revolvers. The two were standing quite close to one another at the time of the occurrence, and the bullet entered the abdomen of the wounded man. He was without delay removed to the infirmary. On admission there, he was found to be in a state of great collapse; and an examination revealed a wound just below the ensiform cartilage, and to the left side. From this wound, which evidently communicated with the abdominal cavity, some bloody serum issued. The patient complained also of pain in the left thigh and leg, which was relieved by flexing the limb. No wound of exit of the bullet could be detected; but the injury received was evidently of so serious a nature that the patient was not expected to survive. Next day, however, he rallied, and no bad symptoms showed themselves. There was no vomiting; the bowels acted regularly; and no peritonitis supervened. Last week, however, he complained of pain in the left lumbar region, and some swelling showed itself, accompanied by a rise of temperature. On the 23d ultimo, Professor George Buchanan cut into this swelling, with antiseptic precautions, and found a cavity filled with blood. On introducing his finger, he came upon the broken transverse process of one of the vertebræ; and further examination detected the bullet lying in the erector spinæ muscle of that side. The patient has progressed very favorably since the operation."

Winking. — Said Mrs. Gallagher: "I think it is wrong to make these soda fountains so shiny, white and dazzling. They don't trouble me, but I've observed that my husband can never look at one without winking."

Crede's Method.—Crede's method is a method advocated by Crede to assist the uterus in its efforts to expel the placenta. It consists in seizing the uterus between the fingers and thumb through the abdominal walls and thus expressing the secundines as one would squeeze a pit from a cherry. Fehling employed it in ninety cases, and has compared the results with those in ninety-five cases in which the placenta was allowed to come just as nature expelled it. The average loss of blood in the first ninety was five ounces, and the time required for expulsion of the placenta 7.7 minutes. In the cases left to nature the average loss of blood was 7.10 ounces, and the time required for expulsion was 13.4 minutes. In eighty-five of the ninety cases of Crede's method the membranes came away entire, and in ninety-one of the ninety-five other cases they came away intact.—*Mich. Med. News.*

GAILLARD'S MEDICAL JOURNAL.

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ORIGINAL ARTICLES.

"Qui Docet Discit."

CALABAR BEAN: ITS ACTION ON THE SPHINCTER PUPILLÆ, THE LEVATOR PALPEBRÆ SUPERIORIS, AND OTHER MUSCLES SUPPLIED BY THE OCULO-MOTOR NERVE. By THOMAS WHARTON JONES, Professor of Ophthalmic Medicine and Surgery in University College, London.

It has been supposed that calabar bean applied to the eye causes contraction of the pupil by paralyzing the dilator muscle, and thus permitting of unrestrained scope to the action of the sphincter pupillæ. But such a view is as unfounded as that according to which atropia is assumed to cause dilatation of the pupil by paralyzing the sphincter, and thus permitting of unrestrained scope to the action of the dilator pupillæ.

As atropia, besides causing dilatation of the pupil, reduces the eye to its lowest state of refraction, so calabar bean conversely, at the same time that it causes contraction of the pupil, brings the eye into a state of adjustment for near vision.

That belladonna, when applied to the eye for the purpose of dilating the pupil, has the effect at the same time of reducing it to its lowest state of refraction, was pointed out long ago by Dr. Wells, a native of Charleston, South Carolina, but latterly practising as a physician in London. In the volume containing his celebrated essay on *Dew*,—an essay eulogized by the late Sir John Herschel as an admirable example of ingenious experiment and inductive reasoning,—there is a paper on Vision, in which Dr. Wells states that he had found belladonna cause an increase of the range of sight in the myopic eye.

At present, the generally received doctrine as to the action of belladonna in reducing the state of refraction of the eye, seems to be that it causes temporary paralysis of the apparatus which adjusts the eye for near vision, and thus giving scope to the operation of elasticity by which it is supposed the eye is reduced to its lowest state of refraction. In regard to the dilatation of the pupil which accompanies this reduction of the refractive state of the eye, it is according to the received doctrine also attributed to the unrestrained action of the dilator pupillæ permitted by a supposed temporary paralysis of the sphincter pupillæ occasioned by the belladonna

I long ago showed that such views are inconsistent with the facts of the case. I maintain that reduction of the eye to its lowest state of refraction, along with dilatation of the pupil by belladonna, is as much the result of a special muscular action, independently of the paralysis of any antagonistic force, as is the increase of the refractive power of the eye with contraction of the pupil by calabar bean.

In an article by Dr. Iwanoff, of Kiew, in Graefe and Salmisch's Handbook of Ophthalmology, there are two figures of the muscular structure of the ciliary body. In the one it is seen that the circular fibres are represented as more strongly developed than the radiating fibres; whilst in the other, there is scarcely any trace of the circular fibres at all, but as is seen, there is a strong development of the radiating muscular fibres. Now let me call attention to the fact that the eye in which the strong development of the circular muscular fibres existed was a *hypermetropic eye*, whilst the eye which presented the strong development of the radiating muscular fibres, but scarcely any trace of the circular, was a *myopic eye*.

Let me ask, then, what do those facts indicate in respect to the junction of the two sets of muscular fibres of the ciliary body in question? Does not the fact of the strong development of the circular fibres in the hypermetropic eye indicate that it must be the agent by which adjustment of the eye for near sight is effected, considering that in the hypermetropic eye the effort to maintain adjustment for the vision of near objects is necessarily in constant operation? And does not the fact of the strong development of the radiating muscular fibres in the myopic eye indicate that they must be the agent by which the adjustment for vision at the greatest distance the eye is capable of is effected, seeing that in the myopic eye the effort to see further off is more frequently required to be made than any effort to see nearer? To these questions I have no hesitation in giving an affirmative answer. I am, in short, perfectly satisfied that the circular muscular fibres of the ciliary body produce adjustment of the eye for the vision of near objects, and that the radiating muscular fibres cause adjustment of the eye for the vision of distant objects. And in explanation of the mechanism of the action of these two sets of muscular fibres in producing the results mentioned, I have little to add to or retract from the account I have given of the subject in my work on Ophthalmic Medicine and Surgery. I shall therefore give a summary of that account and afterwards wind up this paper with a history of my employment of calabar bean, locally applied, as a means of treating paralysis of the muscles supplied by the third and fourth nerves, and a history of my employment of atropia, locally applied, as a means of treating paralysis of the external rectus, which is supplied by the sixth nerve.

The change in the form and position of the crystalline lens, by which the eye is adjusted for near sight, consists in an increase of the convexity of its anterior surface which is thereby, at the same time, approximated towards the cornea. The change in the form and position of the lens, adjusting the eye for distant vision, consists in a diminution of its convexity and a recession of it from the cornea.

Remembering that the lens enclosed in its capsule possesses, especially in early life, a high degree of elasticity, we can readily understand how it is capable of undergoing these changes by pressure on it at its circumference, and how on the remission of the pressure it regains its original form.

As with the advance of life the lens becomes firm and loses elasticity, we can readily perceive how the adjusting power comes at last to fail, and also how, as a matter of course, no adjusting power remains in an eye after the removal of the lens for cataract, even although the patient be a young person.

Calabar bean, besides exciting contraction of the pupil, induces in the eye the state of adjustment for the vision of near objects. The circular muscular fibres of the ciliary body must thus be excited by calabar bean as well as the sphincter pupillæ.

The contraction of the sphincter pupillæ muscle ceasing the pupil falls into a medium width by virtue of the elasticity of the iris, unless contraction of the dilator pupillæ immediately supervenes. So also, the contraction of the circular muscular fibres of the ciliary body ceasing the adjustment of the eye falls into a state of relaxation, by virtue of the elasticity of the lens and parts around it.

This state of relaxation, however, is not, as is commonly alleged, the extreme degree of adjustment for distant vision. I believe it to be only an intermediate state analogous to the state of medium width of the pupil. The true state of full adjustment of the eye for the vision of distant objects, we have seen reason to believe is an active state as well as adjusting for the vision of near objects and that the exterior and radiating muscular fibres of the ciliary body are the agents by which that adjustment is effected.

I have said that the change in the form and position of the lens adjusting the eye for seeing at a distance consists in a diminution of its convexity and a recession of it from the cornea. That the lens is during the adjustment of the eye for distant vision, actually thinner than it is in the dead eye, is a fact which has been ascertained by the ophthalmometric observations of Professor Helmholtz.

Dilatation of the pupil accompanies adjustment of the eye for the vision of distant objects. If, therefore, adjustment of the eye for the vision of distant objects be effected, by the exterior and radiating muscular fibres of the ciliary body, we see that they act in concert with the radiating muscular fibres of the iris which dilate the pupil.

Atropia, at the same time that it excites dilatation of the pupil by stimulating to contraction the radiating muscular fibres of the iris brings the eye into the state of the lowest refraction. It is, therefore, to be inferred that supposing the exterior and radiating muscular fibres of the ciliary body be the agent of adjustment for distant vision, these fibres must be, like the radiating muscular fibres of the iris, susceptible of the stimulating influence of atropia.

Contraction of the radiating muscular fibres of the iris ceasing, the pupil falls into a medium state of dilatation by virtue of the elasticity of the iris, unless contraction of the circular muscular fibres constituting the sphincter immediately supervenes. So also, contraction of the exterior and radiating muscular fibres of the ciliary body relaxing, the adjustment of the eye comes back to an intermediate state by virtue of the elasticity of the lens and surrounding parts, unless the muscular action causing adjustment for near objects is immediately exerted. When contraction of the pupil ceases it is not necessarily succeeded by great dilatation; nor, on the other hand when dilatation of the pupil ceases, is it necessarily followed by great contraction In like manner, when adjustment of the eye for near objects ceases, it is not necessarily succeeded by the lowest state of refraction the eye is capable of;—nor *vice versa*, is adjustment of the eye for the vision of distant objects, when it ceases, followed by the high state of refraction adjusting the eye for vision at the nearest point of distance It has been alleged that in cases of paralysis of the oculo-motor nerve, in which the power of adjustment of the eye for near vision is lost, the eye is reduced to the lowest state of refraction; and this has been adduced in support of the opinion that the state of adjustment for vision at a distance is a passive one. But such is not the fact any more than that the pupil is at the same time widely dilated in such cases.

In cases of paralysis of the oculo-motor nerve the pupil remains in or about the middle width, being brought thereto, on the suspension of the action of the paralyzed sphincter pupillæ by the elasticity of the iris, and it still admits of becoming fully dilated on the application of atropia to the eye. In such cases the adjustment of the eye is in like manner in an intermediate state, and may still be reduced to its furthest point by the application of belladonna or atropia.

The muscular fibres adjusting the eye for distant vision are like the dilator pupillæ muscle, under the control of the sympathetic nerve. Not being, therefore, in a case of paralysis of the oculo-motor nerve paralyzed any more than the dilator pupillæ, they may still be exerted as usual along with the dilator pupillæ. And in addition to this, it may be observed that as the eyeball cannot, in a case of paralysis of the oculo-motor nerve, be converged, but is directed either forward or somewhat to the temporal side, there is, consensually with the action of the external rectus, a tendency towards dilatation of the pupil greater than the middle state, and a tendency towards adjustment of the eye for vision at a distance beyond what I consider to be the mere middle state, or state of relaxation of adjustment.

These are distinctions which it is of consequence to keep in mind. By not taking into account the consensual dependence of the motions of the pupil and adjustments for distance on the direction of the visual axis, which is regulated by the voluntary action of the muscles of the eyeball, it has been erroneously fancied by some persons that they possessed direct voluntary power over the motions of the pupil; when, in fact, their pupils contracted and dilated *involuntarily* as usual, only according as near or distant objects were looked at, and the eyeballs, accordingly, either converged or directed straight forwards *voluntarily.*

I have above spoken of the property which calabar bean possesses of causing contraction of the pupil by exciting to action the sphincter muscle, which is under the control of the oculo-motor nerve.

Taking this fact into consideration, it occurred to me, some years ago, to try the effect of dropping into the eye a solution of the extract of calabar bean in a case of paralysis of the oculo-motor nerve, as manifested by ptosis, inability to turn the eyeball inwards, upwards and downwards, as well as by the inability of the pupil to contract under the influence of light.

The result of six weeks' treatment with the calabar bean extract, applied in this manner every alternate day, was a restoration of the power of the paralyzed muscles.

In the cases of paralysis of the superior oblique muscle, which afterwards came under my care, I tried the same treatment, and found that the calabar bean operated in them with equal curative effect.

I recorded this experience in *The Practitioner* medical journal about twelve years ago, and I have since continued to employ the remedy with good success. The quantity of the extract of calabar bean for each application is a portion of the bulk of half a barleycorn, and this is rendered fluid by admixture with a drop or two of two of water, so as to fit it to be dropped into the eye

I have tried esserine pretty extensively, but though it causes contraction of the pupil readily enough, I have not found it nearly so efficient as the extract in restoring the power of the levator palpebræ superioris and of the rectus internus, rectus superior, rectus inferior and obliquus inferior muscles, in cases of paralysis of the third nerve, nor in restoring the power of the obliquus superior in cases of paralysis of the fourth nerve.

The gelatine discs and squares impregnated with esserine, I have found to be *still less* efficient. Of course, it is to be remembered and understood that the paralysis in the cases thus successfully treated, did not depend on intracranial disease implicating the root of the nerve, nor on degeneration of the nerve itself. I may, however, mention that in a case of cerebral amaurosis, there was paralysis of the muscles supplied by the oculo-motor nerve, so that it appeared at first as if the root of this nerve was implicated in the morbid state of the brain causing the amaurosis.

After a time, however, the muscles supplied by the oculo-motor nerve regained their power, from which circumstance it would appear that the root of the nerve had not suffered degeneration of structure, but had probably been only pressed on by some effused fluid, which being absorbed and the pressure thereby removed, the nerve had recovered its function.

As there is a consensual action between the internal rectus oculi and the sphincter pupillæ muscles, so there is, as before mentioned, a similar consensual action between the external rectus oculi and the dilator pupillæ muscles. Taking this into consideration, I was led, after my success with calabar bean in the treatment of paralysis of the muscles supplied by the oculo-motor nerve, to try drops of the liquor atropiæ to the eye in cases of paralysis of the external rectus muscle, which is supplied by the sixth nerve, a mode of treatment the result of which has been a cure in some cases and an amelioration of the symptoms in others.

Of course it is to be understood that in the cases in which a cure was effected, the paralysis of the sixth nerve was not owing to intracranial disease of its root.

THE PRACTICAL VALUE OF SPHYGMOGRAPHIC TRACINGS, BY R. J. NUNN, M. D., Savannah, Ga.

A good deal has been written from time to time, as to the importance of the sphygmograph, as an instrument of precision. As the result of the too common habit of accepting without question every assertion made by a recognized medical author, or which happens to receive the quasi endorsement of popular medical journals, the unwary might easily be led into error as to the real value of sphymographic tracings.

A careful examination of many sphygmographic tracings has convinced me that no one chart taken by itself, is of any value as a record of the character of the pulse from which it was taken, nor is it of any aid to the diagnostician, but that, owing to unavoidable errors, it must needs be compared with a standard tracing.

The sources of error are two-fold ; one from the patient, the other from the observer.

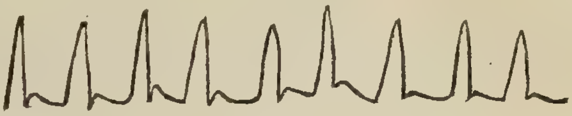
From the patient come errors resulting from changes in the tension of muscles, alterations in position, etc., etc.

From the observer come variations in the pressure required for record, and with some instruments, unsteadiness in keeping the instrument in place.

It is to the effects of the variations of pressure that I desire to direct attention ; to variations which change entirely the character of the tracings obtained.

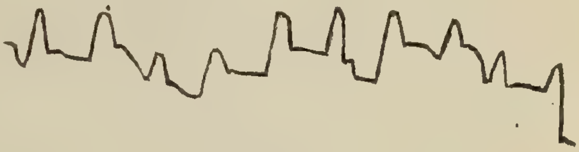
As it is not possible to maintain a standard pressure for all the sphygmographs in use, I propose to show the necessity of having a normal pulse taken with the same pressure, and the same instrument used with the patient, and to have the two placed side by side for comparison. It is only by this course that anything approximating to a correct conclusion, can possibly be arrived at.

The tracings sent herewith were taken from my own pulse within five minutes of each other, and with one of Pond's sphygmographs of the latest pattern, as supplied by Messrs. Parke, Davis & Co.



No. I.

No. I was taken with the adjusting screw turned out so as to require the greatest possible pressure.



No. 2.

No. 2 was taken with the screw run in, so as to require the least pressure practicable.

The rate of traverse was the same in both cases.

I have seen it asserted, that while the height of the systolic line would be changed by variations of pressure, that the sharpness of the systo-diastolic angle would remain unchanged. While this is theoretically true, perhaps, a comparison of the two tracings will show that such is not the case in practice. It will be seen that the angle in No. I, taken at a high pressure, is acute ; in No. 2, on the contrary, the effect of low pressure is seen by the flattening of the angle, until it becomes a line ; so also with the curve on the diastolic line ascribed to the closure of the semi-lunar valves, it is clear and distinct in No. I, but it is at times almost imperceptible in No. 2. As might be expected, the length of the systolic line varies as the pressure.

A careful comparison of these two tracings shows them to be wholly unlike, and this fact, clearer than words, demonstrates the remarkable alterations which take place in tracings of the same pulse, by changing the pressure at which the instrument is worked. Hence arises the difficulty of determining whether variations, in a tracing, from the normal standard, show abnormalities in the pulse, or are produced by the instrument.

From what has been shown, it is evident that to make a sphygmographic tracing valuable as a record, or to convey by it to another person a correct idea of the deviations of a pulse from the healthy standard, it is essential that the pressure at which the tracing was taken should be known, and that the line which a normal pulse would give,under like circumstances,should be firmly impressed upon the mind.

In no other way is this possible than by having the two tracings before the eye at the same time.

It might be well to observe that this is not the first time that the defect to which I have referred, has been observed. An effort was made to overcome this difficulty by fixing the instrument at a definite pressure. Such a device would seriously limit the sphere of application of the sphygmograph, and would still fail to convey any exact impression to the readers of the record, unless every instrument could be adjusted to the same pressure ; or by assuming a standard pressure, that the medical world might be taught the normal outline at this pressure ; either course is practically impossible ; and the only other method by which accuracy can be approximated, is the one suggested herein.

Irideremia Totalis Traumatica.

By T. E. Murrell, M.D., Little Rock, Arkansas.

I do not report this case because of its rarity, since many such are now on record; but more for its bearing upon the subject of the nutrition of the lens.

In a paper before the College of Physicians and Surgeons, Philadelphia, April 5th,1882,entitled " Two cases of Congenital Irideremia with Lamellar Cataract in One and Dislocated Cataractous Lenses in the Other" reported in the *Medical and Surgical Reporter* for June 3rd, 1882, Dr. C. Harlan attributes the cataract to absence of iris, which, in his opinion, evidently supplies nutriment to the lens.

Joseph Clark, aged 43 years, called at my office in November 1877. I noticed the right eye entirely black in the corneal space,as if there was an old iridocyclitis, or absence of the iris. The ophthalmoscope demonstrated entire absence of the iris, not a trace of it remaining.

The ciliary processes were plainly visible, and the outline of the perfectly transparent lens was clearly distinguishable. The fundus could be seen through the lens, and also between it and the ciliary body. On the anterior capsule of the lens near the original margin of the pupil were seen a few minute pigment dots. Vision was, o course, greatly blurred by exposure of the entire lens, and aphakial space beyond, but with a diaphragun with central perforation cutting off peripheral rays, vision was very good, the eye readily defining Snellen $\frac{20}{40}$ and Jaeger 2. Accommodation was $\frac{1}{15}$, about normal for his age,already presbyopic. During the act of accommodation for near points the periphery of the lens was seen to move towards the center of the lens, of course at the expense of its polar axis.

The history of the case is this:—Sixteen years before, while driving a nail it glanced under the head of the hammer, flew out of its position in the plank and rebounded with a sharp whirl striking him in the right eye. It instantly blinded him, the anterior chamber was filled with blood, a wound was seen near the margin of the cornea, and the eye was considerably inflamed and painful for a few days. Gradually the inflammation and irritation subsided, sight began to return, and finally it left the eye in the condition as when I saw it. No change in the vision had occurred during the sixteen years that he was aware of. Neither did I discover any lesion of any of the intra-ocular tunics to indicate serious inflammation of, or injury to them, at the time of accident or subsequently.

I requested him to call to see me again. After four and a half years he complied with my request. I now found, June,1882, the lens full of broad striæ running from equator to pole, with more or less dotted opacities between the bands. Vision was reduced to counting fingers two feet off. The fundus could not be seen through the lens, but was seen through the narrow margin around it. No intra-ocular changes could be detected through this narrow rim. There had been no pain or irritation in the eye at any time, and vision began slowly to fail about a year ago.

It is a question involved in some doubt as to the causative relations between the loss of iris and cataractous changes in the lens, since the latter followed only after a period of about twenty years. The other lens remains healthy, and if it does not follow in the usual manner, some connection may be concluded to exist between the changes in the lens of the right eye and absence of iris, and will add somewhat to the strength of Dr. Harlan's position.

LECTURE ON HEREDITARY AND NON-HEREDITARY PHTHISIS—Delivered in the Hospital for Consumption, Brompton, Feb. 1, 1882. By REGINALD E. THOMPSON, M.D., F.R.C.P., Physician to the Hospital.

GENTLEMEN—It falls to my lot to-day to inaugurate a new series of lectures which are to be given in this hospital on one day in the week, in order that those who wish to study pulmonary disease, and especially that form of disease to which this hospital is chiefly devoted—pulmonary consumption,—may have opportunities of seeing any special cases of interest which may from time to time occur in the hospital, and of hearing those remarks which we may wish to make upon them.

For the subject of the present lecture I have chosen two different aspects under which phthisis presents itself—as hereditary on the one hand, including under this term all those cases in which a history of family predisposition is obtained from the patient; and, on the other hand, as non-hereditary or acquired, in which no such history can be obtained.

It would, however, be almost useless to attempt to put before you any views on these points in an intelligible manner until I have devoted a brief space of time to a concise exposition of the process of phthisis, and its relation to tubercle, inasmuch as very different theories are held regarding the subject; on the one hand, there are those who believe with Laennec that all phthisis is tubercular, and that tubercle precedes phthisis; on the other hand, there are those who follow the views of Niemeyer, believing that tubercle is an accidental result of phthisis, and that the consumptive patient may become tubercular. The term phthisis should in my opinion be applied solely to those cases of pulmonary disease in which actual destruction of the lung tissue takes place. The destruction of tissue is the main feature of the disease; clinically it is recognized by the signs which indicate the formation of cavities, and it may be detected at once by the microscope, by the presence of elastic tissue in the sputa. This destructive process attacks pulmonary tissue, which from previous disease and from constitutional feebleness is unable to resist, and within this category of disease are especially included catarrhal irritation, congestion, and tubercle. In character the process is ulcerative, and follows the analogy of ulceration in other parts of the body, and I do not always understand why it should be assumed that phthisis should be preceded by tubercle, any more than that tubercle should precede all ulcerations of the intestine or other tissues of the body.

Even phthisical ulcers of the bowels cannot be distinguished in all cases from ordinary ulcerations, and the tubercular thickening and infiltration are then a secondary process. Those who believe that tubercle always precedes phthisis have never attempted to bridge over the intervening condition which alters a process of irritative growth into one of destruction. The so-called necrosis of tubercle is not a necessity of the growth, inasmuch as we sometimes find broad bands of glistening white tubercle extending across the lung in which no liquefaction has taken place; and to say that it may suffer necrosis does not put it into a different position with other imperfectly vitalized tissue, nor does it at all explain to what the process of destruction is due. The relation which tubercle bears to phthisis appears to me to depend upon the slow chronic condition of the destructive process: it is a secondary infection resulting from the product of altered tissue. Cases have been reported which appear to militate against the view of infection, and in which no infective focus was discovered; but in the first place, rare cases of the kind must be admitted with caution, and in the next place it is very easy to overlook even important conditions in making necropsies, and every one who is accustomed to such work knows how easy it is to miss a primary abscess in cases of pyæmia: it may occur in the ear or in the region of the bladder, or be hidden away in some recess which is not generally searched in the ordinary course of examination. These cases ought to be put apart and considered separately, as they might lead to fresh information on the subject, but at present I cannot accept them as subverting the theory of infection. The infective virus which results from the phthisical procsss may be taken up in different ways by the lymphatics and the blood-vessels, leading to acute general miliary tuberculosis; or by the lymphatics only in the neighborhood of the affected part, leading, for example, to that crop of tubercles which is often seen round a cavity; or lastly, it may be driven into the air sacs through the bronchial tubes, propelled by the atmospheric pressure, and leading to that lobular form of tubercle which is seldom absent from fatal cases of phthisis. A great deal too much stress has, I think, been laid on the gaseous condition of the infecting focus, inasmuch as the danger of infection appears to be proportionate to the facility with which it can be absorbed; and when gaseous matter breaks down and becomes liquefied it is more ready for absorption, and capable of being more readily transferred than when in the gaseous condition.

As regards the agency of the lymphatics in absorbing the infective virus, the opaque irritated condition of the lymphatics of the mesentery bear evidence to this point, and I have found in more than one case thickening to a marked extent in the thoracic duct. With regard to the distribution of the matter by the blood-vessels, it must be mentioned that pressure on the blood-vessels prevents the deposit of miliary tubercle in those parts which ought to be supplied by the impeded blood-vessels. To give an example, I would mention a case where a patient suffering from cavity affecting the apex of the right lung was subsequently attacked by pleurisy with effusion. Symptoms of miliary tubercle supervened upon this, from which the patient died. At the necropsy the lower part of the lung, which was pressed upon by the pleuritic fluid, was found free from the miliary tubercle, which was thickly disseminated through the upper part of the lung below the cavity, a plain line of demarcation marking off the affected district.

As regards the distribution of the matter through the bronchial tubes, I must point out that the tracts principally occupied by the lobular form of tubercle are those which are to the front and in the axillary portions of the lung, the posterior lower parts of the lung being seldom affected unless the diaphragm is adherent. There are also certain sexual characteristics in the localities affected by tubercle dependent upon the sexual peculiarities of respiration which support the theory. In woman it is not uncommon to find quite the lower part of the lung free from tubercle, the middle portion of the lung very thickly studded with tubercle. In man the base of the lung is frequently occupied, and especially towards the anterior and middle parts of the base, diaphragmatic respiration being more marked in man than in woman. The theory that tubercle is deposited in those parts which are most used, although containing some truth, is limited to the miliary form, and will not apply to the lobular form of tubercle, inasmuch as the diaphragmatic portion of the lung in man is the most active part of the lung, even under conditions of ordinary respiration. I would also say that pressure on the bronchial tubes prevents the deposit of the lobular tubercle, and that an examination of the bronchioles leading to the affected district will often show that they are in a state of extreme irritation and thickening, while those of other untainted districts are not in this condition.

With regard to the hereditary conditions of phthisis it is well to consider the analogy of other diseases in relation to heredity. In the heredity of rheumatism we know that there is a family tendency to suffer from the disease, and in some cases the tendency is confined to joint mischief, in others the heart may be especially implicated. It has also been observed that some families are especially prone to suffer from eruptive fevers, while others show a remarkable disinclination; and, to quote the opinion of M. Ricord concerning syphilis, there are families which appear to be peculiarly susceptible to the ravages of syphilis, while others appear almost invulnerable.

Now, in these instances I think it will not be assuming too much to say that there are two factors in the development of disease. First, the family susceptibility; and, secondly, the exposure to a certain virus about the time of the development of the actual disease. No doubt, I think, can exist that the virus of syphilis or the zymotic fevers may be actually transmitted from parent to offspring, and the unborn child may be attacked by disease transmitted thus directly, or the disease may appear in the infant soon after birth, and in similar fashion the virus of tubercle may be directly transmitted to the infant, and cases have been recorded which appear to bear this interpretation. But susceptibility to the virus does not stand on the same footing, and in this case I presume that there are certain constitutional and structural peculiarities, the result of inheritance, which favor the development of the disease when the individual is exposed anew to the action of the virus.

As regards the development of phthisis, there are two factors which demand consideration: the first is the constitutional susceptibility as shown in the systemic disposition to give way to or permit the phthisical action, and, secondly, the structural defect in the lungs which attracts the agent to those particular organs. Not only a favorable climate is requisite, but a suitable soil, the constitutional susceptibility representing the first, the feeble or devitalized structure of the lungs representing the second. The permissive yielding of the system, the absence of non-resistant power, is one of the great features in phthisis. Every-day experience of disease in all its bearings proves how an individual at one time proof against all attacks succumbs readily to disease at another, and this is true not only as regards phthisis, but also in eruptive fevers and rheumatism, the more enfeebled the body the more likely it is to develop disease.

There is perhaps no medical fact more generally recognized, even by the vulgar, that the frequent occurrence of phthisis among families, a fact fully appreciated by the actuaries and medical referees of life assurance offices, yet when search is made among the numerous writings on phthisis for some views regarding the so-called hereditary and non-hereditary phthisis, we find very little regarding any distinctions to be made between the two or concerning the exact conditions of the heredity. In fact, most authors have contented themselves with giving the relative numbers of the hereditary and non-hereditary forms, a point which, although of interest, is not of great practical use.

The attempt was made by M. Briquet working upon eighty-nine cases of hereditary phthisis to draw conclusions as to the effect of the hereditary, and although I do not demur to the conclusions which he draws, the number of cases appears to me far too small. A more valuable investigation has been made by Dr. Theodore Williams from the consideration of 484 hereditary cases out of 1,000 cases of phthisis, and his results, which are of practical value, are the only ones which are derived from an adequate number of cases. For some time I have been occupied in collecting a number of hospital cases, and although I have not fully completed the work, I can venture to bring before you the results of the consideration of 1,600 cases of *males only* in whom the hereditary predisposition was said to be present, and among men the memory of family history is far more defective than among women, so that I consider the positive evidence of hereditary disease among men far more satisfactory than the absence of such evidence, resulting from defective memory frequently, is conclusive as regards the acquired condition of the disease. The proportion of hereditary to non-hereditary cases I find to be 36 per cent., a number closely approximating to that given by Dr. Pollock (33 per cent.), and identical with that given by Dr. Cotton (36 per cent.); or the relative number may be roughly put as one hereditary to two non-hereditary. To be exact, if we take 3,077 male cases of phthisis, 1,000 of these will give a history of hereditary or family phthisis. Dr. Williams's cases, derived from a much higher class of society than that from which my hospital statistics are taken, showed a percentage of 48; and this higher number I take to be due partly to the greater interest in points of family history shown by the upper classes, and partly to the diminished liability to acquired phthisis due to the better conditions of life.

The following numbers represent the relative proportions in which the several members of the families were implicated in the disease :

Father alone	168	252
Ditto, with one or more brothers	34	
Ditto, with brothers and sisters	50	
Mother alone	158	241
Ditto, with one or more brothers	25	
Ditto, with brothers and sisters	58	
Father and mother	40	68
Ditto, with one or more brothers	8	
Ditto, with brothers and sisters	20	
Uncle	47	439
Aunt	37	
Grandfather	7	
Grandmother	5	
Sisters, with one or more Brothers	152	
Brothers only	191	
Total		1000

The above numbers show a slight increase in favor of direct heredity from the father, as compared with the number of cross heredity from the mother. Attention must also be directed to the large number of cases in which, with a history of direct or cross heredity, the patient appears to have been, at least at the time of admission into the hospital, the only member of the second generation affected with phthisis.

The next point which the statistics show is the date of attack, and I have arranged the numbers in quinquennial periods beginning from five years of age, each number showing the first year of the period ; and I much prefer this system of arrangement to that of taking averages by adding the number of years and dividing by the number of cases ; the latter method is not so instructive, and is likely to prove erroneous from accidental causes.

Cases.	Age at which attack commenced.												
	5	10	15	20	25	30	35	40	45	50	55	60	65
Non-hereditary, 400	1	6	55	76	89	71	41	32	14	12	3	—	—
Direct heredity: Father, 400	8	23	74	94	81	54	38	13	9	4	4	1	—
Cross heredity: Mother, 400	3	0	90	113	79	49	33	11	7	3	[illegible]	2	1

In this table I have collected 400 non-hereditary cases, in which from the manner in which they were taken it was evident that pains had been taken to question the patient as to any history of family disease. They show (what is sufficiently well known) that the ages most liable to the attack are between fifteen and fifty, the most vulnerable period being between twenty-five and thirty. From the 400 cases of direct heredity from the father, it is evident that the susceptibility is put forward five years, and extends from ten to forty-five, the early periods between ten and twenty-five, being very much more liable, and after twenty-five the periods being less liable than in the non-hereditary form of disease. From this even distribution before and after the culminating period of twenty, it would seem that the effect of direct heredity is to increase the vulnerability of phthisis during these periods of life, but more especially at the time of the growth of the body between boyhood and adult life, as between the ages of fifteen and thirty. In the 400 cases of cross heredity from the mother to the son, the susceptibility is shown in a very remarkable manner during the period of from fifteen to thirty. The susceptibility appears to be loaded upon the period of the chief growth of the body, and it does not appear to be equal during the earlier periods of life.

The following table shows the relative numbers attacked before thirty and after thirty under the influence of heredity.

Cases.	Before the age of 30.	After the age of 30.
Non-hereditary, 400..	227	173
Father: hereditary, 400.........	277	123
Mother: hereditary, 400....	294	106

Now, I do not understand on what grounds this discrepancy can be accounted for if it be considered that tubercle is the sole inherited entity under all circumstances. Actuaries and those connected with life assurances generally hold that the cross heredity is worse than the direct heredity, but I am not aware of any published facts which support this opinion, which is here proved to be correct. Knowing that copious hæmoptysis is common among males, I proceeded to investigate the effect of heredity as regards this occurrence, and the following table will show the cases of phthisis arranged as before in quinquennial periods according to age at the date of the first onset, in which copious hæmoptysis occurred to the extent at least of a quarter of a pint.

COPIOUS HÆMOPTYSIS.

Cases.	Age at which the attack commenced												
	5	10	15	20	25	30	35	40	45	50	55	60	65
Mother, 123....... ...	—	--	27	30	34	18	8	2	3	1	--	--	-
Father, 102....–... ...	1	4	16	22	24	19	9	4	1	--	1	1	—
Non-hereditary, 105	—	2	14	20	24	16	12	8	5	2	—	—	—

This table shows that out of the 400 cases of direct heredity, cross heredity and non-heredity, those who were the subjects of cross heredity, that is from the mother, were more liable to copious hæmoptysis than either the cases of direct heredity or of non-heredity, and the numbers of the two latter so closely correspond as to show that heredity from the father has little influence as regards hæmorrhage. The conclusion that I draw from this table is a simple but important one, that an heredity is derived from the mother which differs from that derived from the father, and to this must be attributed the excess of cases of copious hæmoptysis. This difference will be very distinctly seen in the following table, which show the number of cases of copious hæmoptysis occurring before and after thirty.

Cases.	Before the age of 30.	After the age of 30.
Mother, 123...	91	32
Father, 102...........	65	37
Non-hereditary, 105.........	60	45

Is there any explanation to be given of this fact? There is, and the explanation is obtained from the statistics of hæmophilia which have shown that the tendency to this disease is transmitted by inheritance, and in a large proportion from mothers to sons, and it appears to me that we have here a very strong argument not connecting copious hæmoptysis with tubercle, with hæmophilia.

I will now direct your attention to the consideration of cases of double heredity, the inheritance of phthisis from the father and mother, and I have not included them with the others, as after diligent search I have only succeeded in collecting 125 cases; for the sake of comparison with the others I have calculated them up to 400.

Cases.	Age at which attack commenced.												
	5	10	15	20	25	30	35	40	45	50	55	60	65
Double Heredity, 125	—	3	20	40	23	15	12	9	1	1	1	—	—
Calculated to 400	—	10	74	128	75	48	37	29	3	3	3	—	—

This table shows a close approximation to the table of cases of cross heredity from the mother, and in fact the calculated numbers for 400 cases of double heredity are almost identical with those of the actual numbers of 400 cases of cross heredity between the ages of fifteen and twenty-five, in the first case being 202, in the latter 203, and the calculated number of cases before thirty amount to 287, not quite equal to the actual numbers for cases of cross heredity, which is 294. These cases, however, do not show a greater tendency to hæmorrhage than is shown in the cases of direct and non-heredity, but there is another consideration to which I must direct your attention, viz., the comparative fatality of the various forms of heredity.

NUMBER OF FATAL CASES.

Cases.	Deaths.	Percentage.
Non-hereditary, 400	74	18.5
Father, 401	70	17.5
Mother, 400	68	17
Father and Mother, 125	35	28
Calculated, 400	112	—

If appears reasonable to conclude from this table that the effect of double heredity is not only shown by the excessive susceptibility at the period of the growth of the body during early adult life, but that the constitutional weakness is such that the power of recuperation is reduced to a minimum and consequently the death rate very much increased. Evidently life assurance offices do wisely in rejecting lives of young individuals who have father and mother affected with consumption.

Infectious Diseases in Pregnancy.

By Dr. J. G. Kiernan, Chicago, Ill.

There are numerous researches which seem to establish it as a fact that if the infectious diseases constitute a source of danger to the child in utero, it is not by reason of their own special action on the fœtus, but by the profound changes they induce in the tissues of the mother and their interference with her organic functions. Abortions are noticeable in all varieties of the infectious diseases, but they are not the rule. The proportion varies according to the type of the disease, the character of the epidemic, and, as in typhoid fever, the mode of treatment. According to Runge (*Sammlung Klinischer Vortrage*, No. 147) the abortions due to the existence of infectious diseases in the mother come under two great categories. The first is that in which the death of the child precedes its expulsion, and is itself the cause of the same. Runge believes that death of the fœtus is due to one of four causes. First: Elevation of temperature. His results accord with those of Kaminski in showing that extreme andp rolonged elevation of temperature is one of the most frequent causes of fœtal death in the infectious diseases. A temperature of 107° F. is absolute death to the fœtus, and from the time the temperature of the mother rises to 104° the danger of fœtal death increases. Second: Death is often due to difficulty in the placental respiration. Death of the fœtus is often observed in consequence of maternal cardiopathies. Third: Death from the transmission of infection from the mother. The possibility of this transmission has been satisfactorily established, especially as regards variola; it is not certain death to the fœtus and is not frequent. Fortual has has noticed this phenomenon in scarlatina, Thomas in measles, and Du-check in malaria. Fourth: The death of the fœtus is sometimes due to anatomical changes in the placenta. Slavjanski has found that in cholera there is an alteration of the epithelium of the placental villosities which leads to the death of the fœtus. In the second category of Runge the child is expelled alive. In this case the causes which act on the uterus are the elevation of temperature and the modifications in the quantity and quality of the blood. As to hæmorrhage, which generally plays such an important role in the etiology of abortion consecutive to infectious diseases, it is not satisfactorily settled whether it be the cause or the first effect of the abortion. In typhoid fever it is generally wanting when the pregnancy is more than half completed. From a therapeutical point of view the rise of temperature should be combatted, the cardiac and respiratory functions stimulated. In the present state of knowledge Porok's conclusions respecting fœtal therapeutics must be regarded as premature.

Curable Ascites of Alcoholists.—Ascites occurring among alcoholists is generally regarded as the result of hepatic cirrhosis and hence incurable. In two patients Dr. Bouveret (*Lyon Medical*) has noticed a perfectly curable ascites. The first case was a man aged forty-five who was a clear case of alcoholism. Following ecrtain intestinal and gastric disorders a marked ascites made its appearance to which relief could only be given by tapping. The patient fully recovered after nine months of treatment. Bouvere brings this case and a second similar case which he reports into relation with the ascites which Murchison has reported as accompanying hepatic congestion, and Semmold has found to exist in certain cases of interstitial hepatitis and finally with the ascites found in chronic peritonitis by Leudet and Lancereux. Differential diagnosis is impossible and only the progress of the affection can throw light on the nature of the ascites.

Operative Treatment of Uterine Anteversion. — Mermann (*Archiv fur Gynakologie*) is inclined to believe that the grave symptoms which result from anteversion result more from the deviation itself than from the chronic inflammation which accompanies it. Treatment therefore should be chiefly directed against deviation. The method employed by Mermann, and which has succeeded in his hands, resembles that of Dr. Marion Sims. Sims excised the fold which is formed before the cervix in consequence of the traction exercised on the vaginal mucous membrane. This fold is formed by the mucous membrane corresponding to the insertion of the vagina on the cervix and the corresponding part of the anterior wall of the vagina. Mermann denudes the anterior lip of the vaginal portion and raises up on the anterior vaginal wall to within four centimetres of the urethral orifice a fragment two centimetres broad by one high; the two denuded surfaces being united by sutures. To avoid including the urethra in the sutures a catheter is kept therein during the operation. To relieve the energetic traction which may be made on the points of suture and which may interfere with union by first intention, Mermann proposes to pass an ansa of thread through the thickness of the vaginal portion, fixing this ansa to the abdomen by adhesive plaster. The ansa can be left with impunity until the sutures are removed.

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ECLECTIC DEPARTMENT.

"Carpere et colligere."

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Treatment of Eczema.—By R. M. Simon, B. A., M. B., *Cantab.*

What is eczema? Recent pathology has made it tolerably clear that it is a catarrh of the true skin, an inflammation, acute or chronic, with hyperæmia, proliferation of existing tissue elements, and exudation of blood elements. Accepting this view, which appears proved, how many independent skin diseases we can remove from our classification, and how easily can we see the relationship between hitherto separated affections. We can see how the simplest form of skin catarrh, the simple vascular engorgement, which we call erythema, may pass by slight exudation underneath the epidermis, into the condition of macules, by a greater local irritation, causing proliferation of existing cells into the papule; and how the papule may, by passage of the serum through the lower epidermic strata, become a vesicle; the vesicle, by fatty degeneration of its contents, become a pustule, and how such affections as impetigo and ecthyma, differing pathologically only in the size of pustules, be referred to their true classification. Surely it would be better to give up the name of eczema, seeing that we often have cases of papular eczema without any obvious exudation, and for all this class of cases substitute the name dermatitis.

This very brief summary of the pathological anatomy of eczema seeems necessary before commencing the discussion of its treatment, as by remembering our definition we at once enlarge the limits of the disease and simplify the use of remedies. For example, remembering that the prime factor in its causation is local hyperæmia, we can trace the connection between the troublesome eczema of the lower extremities and varicose veins with their attendant venous congestion, while a recognition of the cause suggests a remedy, for half a cure is often effected by placing the leg in a position of mechanical advantage, or by the use of carefully adjusted means of support, and especially Martin's bandages. I say half a cure, for a long standing congestion, such as the one under consideration, produces changes in the skin which require further treatment.

The recognition of the true pathology of eczema has been the work of comparatively recent years, and while great credit has been rightly accorded to the Vienna school of dermatologists, and great success and reputation have followed the work of Hebra and others based on pathological considerations, the danger of extolling local treatment to the neglect of constitutional, has been incurred to a great extent. German dermatologists have run to the extreme of denying constitutional causation; English ones, on the other hand, have assigned to local conditions too little importance, and each school has accordingly been too restricted in treatment adopted. The one relying on internal, the other on external treatment.

Few will deny that rachitic children are more liable to eczematous eruptions than more healthy children, while none, I think, would attempt to treat such cases without the use of cod liver oil and other tonics. All of us must have seen the almost immediate benefit resulting from the administration of anti-gouty remedies in cases which have perhaps resisted all the ingenuity of local prescriptions, without a knowledge of the fact that a gouty diathesis was at the bottom of the mischief. We recognize that bronchitis, asthma, dyspepsia, may be traceable to a gouty diathesis, but few admit that skin affections may also be so referred, and unfortunately such as are of the most intractable nature. One of the most difficult forms to treat, namely, that of dry eczema, or eczema associated with slight exudation about the fingers and palms of the hands is almost invariably of gouty origin, and is always benefited by iodide potash and colchicum. No doubt the antagonism arises in great measure from the former excessive use of arsenic in all skin diseases. While the value of arsenic is undoubted on the grounds of its influence on the formation of the epidermis, its use is becoming more and more rare in general dermatology. It is only in squamous eczema that I advocate its use, believing that in no other cases of eczema is it of any benefit.

Any one may have an attack of eczema, and it will always be necessary to seek a cause. With some it may be gout; it may depend on irritation arising from trade causes, as from handling sugar, or lime, or flour, causing a condition known as grocers', bricklayers', or bakers' itch. Scabies, which depends upon the presence of an acarus, is a frequent cause of eczema: partly on account of the intolerable itching and consequent scratching causing diffused formation of vesicles, etc., and perhaps more often on account of the too long persistence in treatment by sulphur.

Having then been able to find a cause, local or constitutional, for the disease, and having, if possible, removed the cause, or tried to remedy the constitutional taint, we are brought to the problem of how to relieve the local symptoms, and remove the formed products of the inflammation. Cases of acute eczema are rare, and if not interfered with too much, tend to recovery. The duty of the medical attendant is not to cure the disease, but if possible alleviate the symptoms. The patient complains of a burning heat, there is considerable swelling of the affected part, and sometimes the formation of innumerable vesicles. Let alone or treated only by soothing remedies, the swelling goes down, heat disappears and a slight desquamation alone remains. Poultices frequently used generally do harm in this stage; the warmth does not relieve the irritation of the peripheral termination of the nerves, and the external irritation of the poultice often extends the disease. The best means is the use of soothing lotions, and I know none better than one containing two grains acetate of lead, and five minims dilute hydrocyanic acid to the ounce of distilled water. Soft, linen rags must be dipped in the lotion, applied to the part and changed as often as they become dry. Cold water rags may be used in the same way, but it must not be attempted to keep the linen moist by covering it with oil silk; for by so doing, the application soon becomes a warm one. I would remark on the great importance of using soft rain or river water, or distilled water, in the making of lotions—the salts in the hard water are themselves irritants, and aggravate the malady. Cases of acute general eczema of this kind are very rare, but such is the usual commencement of a severe local eczema, and should be treated as I have suggested; dusting the parts with powders, of which a good one is composed of equal parts of oxide zinc and starch has been recommended by many; but I have not found it expedient to use them, except in the so-called eczema intertrigo, which results from the rubbing together, especially in fat people, of contiguous parts, as the scrotum and thigh, the nates, or the fold of the thigh and groin in infants. The object of treatment is to keep the parts dry and make them less likely to irritate each other by contact, but the object is better attained by keeping moistened lint between the parts; and so preventing contact. It is, however, of the utmost importance in the acute stage to avoid the use of irritating ointments, and indeed there is no indication for their use. There is no extensive infiltration; there are no formed elements of inflammation, and the skin if swollen and hot is still supple. Acute eczema then generally improves, hyperæmia disappears, and perhaps a little desquamation alone results to tell of its presence, but sometimes this is not the case. The disease passes from the acute to the chronic condition, we no longer have burning heat, but an intolerable itching takes its place, aggravated by warmth. Vesicles are formed; or some of the epidermic roofs break down moistening the surface of the skin with an albuminous exudation; in some pus takes the place of serum, and we get a crop of pustules which by bursting leave scabs and crusts. Owing to the exciting scratching, the disease is extended, and in other parts erythema is set up and papules are formed. So here we have, as the result of an acute eczema, scales, crusts, vesicles, pustules, papules, and erythema. Are we now to describe the secondary disease as a case of E. erythematodes, E. impetiginoides, Eczema vesiculosum, E. lichenoides? I think it is obvious such a description would be satisfactory to none. The picture I have drawn is a very common one, and furnishes to my mind a very strong argument for a diminution of our dermatological phraseology. Let us speak, if you will, of a papular eczema, not of eczema lichenoides, and by so doing we shall better remember our pathology, and I feel sure be more successful as we try to be more scientific in treatment.

Having then a case of chronic eczema, much will depend upon its seat, especially whether it occurs on hairy or non-hairy parts, or whether or no there is much infiltration of the part, and on the presence of crusts or scabs. Crusts and scabs do not occur to any great extent on non-hairy parts, as they are rubbed off by contact with external objects, but they cling to the hairs on the head or face, and constitute a serious difficulty in treatment. They must be removed, and this point must be insisted on. I generally order the head to be well anointed with any oil, sweet or almond being preferable, and a flannel cap to be worn day and night until the crusts are sufficiently softened to be removable by the fingers or a comb. Should this means fail, a poultice will always effect our object. Cutting off the hair short is not in the majority of cases necessary, but removal of scabs is a *sine qua non* for success. Having done this, say in a case of eczema capitis, the question of further treatment arises, and we must start by remembering two points of importance; first, that if the air be allowed free access to the discharging surface, crusts will again inevitably form, and the trouble of removal again arise; secondly that frequent washing keeps up the irritation, and soddens the parts so that our ointments do not adapt themselves exactly to the affected places. While we have a condition in which pustulation is going on, ointments should be used of a soothing character, and I know of none better than the unguentum zinci oleatis. It does not really much matter what ointments are used. The point of importance is that the ointment be used in large quantities, thickly plastered on, and be an effectual barrier against admission of air. Under this treatment pustulation soon ceases, scabs no longer form, and the surface heals. If we now examine the head, especially in a scantily covered child's head, we find the skin rough, harsh and papular.

We may discontinue our ointment, and begin to wash the head every other night with Hebra's spiritus saponis kalinus; made by mixing two parts sapo viridis of the B. P. with one of spir. vini rectificatus; allowing the mixture to stand 24 hours, then filtering and adding to the filtrate a little ol. lavandulæ or other scent. A little of this should be poured on a flannel previously dipped into warm water and the flannel rubbed on the head until smart lather be caused, care being taken that the liquid does not run into the eyes. The lather should be allowed to remain on the head some ten minutes or so, and then played off with warm water. This should be done at bed time, and in the morning some hair oil should be used, and the case will soon be well. Should this not occur, use a stimulating ointment, such as ung. picis liquid, in equal parts with ung. zinci oleatis. This has the disadvantage of blackening the part, and a more elegant formula for an equally efficacious liniment is: Saponis mollis; spt. vin. rectificat; oleo cadini a a ℥ i; olei lavandulæ ʒ iss. A little of this should be rubbed on the part night and morning, and washed off before each fresh application. Exclusion of air is not now so necessary as when the crusts are being formed, so that we may use the above. Latterly I have been using instead of the ung. zinci oleatis, an ointment of 20 grains gynocardic acid, to the ounce of vaseline. It is not better than the zinc ointment, but does relieve itching very markedly.

Before leaving the subject of head eczema I wish to refer to the well known dependence of it upon the irritation caused by lice; they should always be sought for in a dirty subject and will generally be found, nearly always indeed where we get enlargement of the glands at the back of the neck, co-existing with a slight but very irritable eczema at the root of the hair behind. I know of no better means of destroying them than a head wash of equal parts of petroleum and olive oil. The nits will be best got rid of by washing with vinegar and the subsequent use of a tooth comb. Eczema of the non-hairy parts of the face must be treated on the general lines of eczema of the body, but is often tedious on account of the difficulty of applying remedies, either from peculiarities of shape or the objection of patients to any thing unsightly.

When the hairy part of the face is affected, constituting the sycosis of many authors (I do not wish by this to insinuate there is no such disease as a sycosis caused by a parasite, though I am sure that such disease is rare), treatment is often very difficult; shaving is I believe inadmissible, for one reason it is painful, for another it keeps up daily a prejudicial irritation, and close cropping of the hair is equally effective for exposing the diseased spots and permitting the application of remedies. Crop the hair then and get to work by removing crusts; apply your ointment diligently. I generally use in such cases an ointment of two parts of unguent hydrarg. nitratis and six of sapo mollis. The skin is often deeply infiltrated, and this ointment tends to the removal of infiltrated matter; but I prefer, where patients will allow me to do so, to cover the part with emplastrum litharg. B. P. I am not aware if this is a common mode of practice, but in my hands it has proved very successful after other means have failed. I apply the plaster myself, and direct it to be kept on until it becomes loose. It must be removed with gentleness of course, and if necessary replaced by other; it acts I believe partly by pressure causing absorption of the exudation resulting from chronic congestion, and partly by the exclusion of air, while the part is kept warm and bathed by natural moisture.

In chronic eczema of the body associated with exudation and formation of scales, for pustulation is not so common as on the head, our treatment must again be first directed to removal of any impediment to the direct application of remedies. Should the scales be thick and the exudation extensive we can get rid of both in a great measure by means of potassa fusa. Use a solution of it, which need rarely be more than half a drachm to an ounce of water, and should generally be tried in a much weaker form. Pass a brush dipped in it over the affected part backward and forward, and then rub it in well with a flannel dipped in warm water, until a lather is caused; continue this and you will see the scales melt away, while the proceeding becomes after a time more and more painful. Discontinue the rubbing and cover the place with rags dipped in cold water or a very weak acetate of lead lotion; continue the soothing applications and repeat the use of potassa fusa in a few days. This treatment I have found very useful in gouty eczema of fingers. Generally speaking, however, scales are not formed in excess, and the skin is merely thickened, and has lost its suppleness. Where, as in the case of hands or feet, it is possible, I recommend the patient to wear a vulcanized india-rubber glove, by means of which the hand is kept warm and bathed in sweat, scales and exudation absorbed, and a cure often effected. It is in such cases especially that the actual ointment does not so much matter, only let it be well made. The chief use of the ointment is to make the skin moist and supply the deficient suppleness and sweat which are lost owing to the pressure of the exudation into the skin. Keep the ointment constantly applied, and avoid washing as much as possible. The ung. picis liquidi is in these cases very useful by diminishing the itching, but may somstimes itself be very irritating, and I therefore, as a rule, give it in equal parts wiih the ung. zinci oleatis.

It would be impossible for me in the limits of a brief paper to consider either all ointments, all lotions,or the treatment of eczema in every situation. My object has been to formulate if possible, a system of treatment founded on a due conception of the pathology of the disease, and I will express in a few brief axioms my views of the disease and its treatment: 1. Eczema is a catarrh of the skin. 2. Its local manifestation may be erythema, a papule, pustule, or vesicle. 3. It may commence acutely and tend then to spontaneous recovery, or chronicity. When chronic, not only are vesicles, etc., formed, but exudation takes place into the true skin. 5. Such exudation must be removed, which must be by absorption by the medium of the blood vessels. 6. Hard water must be always avoided in treatment. 7. In all acute conditions lotions do good, ointments do harm. 8. Air should be excluded. 9. Water used but little. 10. Crusts must be removed.—*Birmingham Medical Review, May.*

CHOICE OF MECHANICAL TREATMENT IN SPINAL DISEASE. BY C. H. GOLDING-BIRD, M. B., F. R. C. S.

Given a case of spinal disease; is any mechanical treatment to be adopted; and, if so, what form is it to take? The answer must mainly come from the practitioner's general experience; yet rules may be formulated to serve as a broad guide in most cases. Confining the remarks now to be offered to cases of caries and of general curvature, the following rules or guides for a choice of mechanical treatment may be laid down.

A. UNCOMPLICATED CARIES OF THE SPINE.—This may be chronic in character or not very acute; there may be slight deformity, or none at all. There is no abscess, no sinus, nor paraplegia. *a. Of Atlas or Axis.*—In the early stage, rest in the recumbent position, with the head between sand-bags, absolutely fixed, is required; and ignorance of the extent and exact situation of the disease render mechanical appliances inadmissible at first. On the subsidence of subjective symptoms, the head must be supported as under class *b*. *b. From Third Cervical to Sixth Dorsal Vertebra.*—The deformity being mostly from the weight of the head, support must be given to it. This is attained (1) by a chin and occiput rest, acting crutch-like from a suitable leather corset below; (2) by a chin and occiput band, acting as a suspender, from a steel spring rod arched over the head, and rising from a plaster-of-Paris corset (this is Sayre's jury-mast). The former is a dead push up, and prevents rotation of the head on the spine; the latter gives elastic constant extension, and permits rotation; it is, therefore, the better. *Note.*—Disease as high as the third dorsal vertebra may be treated without the jury-mast, as under class *c*. The downward weight of the head is not obviated, but the spine is kept still by the fixation of the upper ribs by means of the jacket. *c. From Sixth Dorsal Vertebra Downwards.*—A closely fitting corset of plaster-of-Paris or of poroplastic felt is required. In applying the jacket to cases in class *b*, just enough extension should be employed to open up the chest as in full inspiration. In class *c*, this should be carried out to the full, just short of producing pain in the diseased spine. Extension is obtained either from the arms and head in Sayre's tripod, or by the horizontal position simply, which is the second best; full room is allowed for the play of the lungs, etc., by either, and the diseased vertebræ are relieved from downward pressure. *Note.*—Although the alternative of the poroplastic felt jacket is offered, yet an uprejudiced trial of it makes me condemn it, as a curative agent, in the strongest terms. As a pair of stiff stays, it is useful enough in after-treatment; though even here a thin plaster-jacket, cut down and made to lace on, is far more comfortable, more efficient, and more durable.

B. CARIES OF THE SPINE WITH COMPLICATIONS.—*a. Acute Caries with Pyrexia: Excessive Sensibility: Patient positively ill, or with Acute Abscess.*—Absolute rest in bed, with general medicinal remedies; and mechanical treatment, according to position, should be used only on the subsidence of the acute symptoms. *b. Chronic Abscess.*—This is treated as though the abscess were not present, only protecting it from the support employed by a layer of cotton-wool. The abscess may even, though very large, disappear. *c. Abscess discharging:*

Sinus.—Support should be applied, but a "window" should be cut over the wound. If this be very low down, the jacket may be cut away. This must never be done just above the anterior iliac spines, or the support will not be bearable. In cases of abscess discharging, the movable jacket may be used with advantage; for the "window" is always hard to manage and keep clean. *d. Sores from Pressure : Bedsores.*—These must be allowed to heal, and the cicatrices afterwards protected with cotton-wool under the support, and outside the woven vest. *e. Paraplegia.*—In children the plaster-jacket must be employed; or the jury-mast, according to position. Then they can be carried about, and propped up in a chair. In adults—especially if heavy—the plaster cannot be worn lying down; pressure-sores soon form. They must be kept in bed until able to balance themselves on crutches, then the entire plaster-of-Paris jacket should be worn. Paraplegic cases are better in bed without any appliance. than up with a movable laced support, either of plaster or poroplastic felt. *f. Caries with much or little Deformity, of long standing* : *no Subjective Spinal Symptoms : Ankylosis probably completed.*—Though such cases are really cured already, yet, at times, oppressed action of the thoracic organs, mechanical indigestion, and pain across the pit of the stomach, remain as causes of invalidism. A 12 months' use of the plaster jacket, with the fullest extension, gives marked relief. Projecting breast-bones from angular curvature improve wonderfully, though in the boss behind there may be no apparent change. The poroplastic jacket may be employed after the plaster, but cannot, in these cases, be substituted for it from the first.

Prognosis in Caries : After Treatment. Saving the presence of amyloid disease, prolonged exhaustive suppuration, or other intercurrent malady, by far the greater num- of cases may be viewed hopefully. Other things being equal, the earlier seen and treated, the better the chance of cure. In practice from two to four years will be found an average time for continuing necessary mechanical treatment.

When the plaster-jacket is used, after a subsidence of every subjective symptom (tested for when changing it), during six months it may, as a rule, begin to be discontinued. Except in quite young children its discontinuance must be gradual; the jacket must be made movable, or of poroplastic felt; or stays can be substituted; or even the old time-honored "spinal support," if the patient have one already by him. He should be under observation after "cure" fully another six months.

C. LATERAL OR "GENERAL" CURVATURE.—The choice lies between the reclining board, the old "spinal supports," and Sayre's calisthenic exercise, with or without the jacket. The first is damaging to the general health; the second, curatively of little worth, and now obsolete; the last is the best. In selecting mechanical treatment here, the stage of the disease, rather than the patient's age, or the position of the curative must be considered, and no such treatment should be undertaken without due attention to general health. *a. Antero-posterior General Curvature in Neck and Upper Dorsal Region, causing Poking of Head and Slouchy Appearance.*—The treatment should consist of the daily use of Sayre's calisthenic exercise. *b. Outgrowing Shoulder.*—This is very commonly disregarded, and masked by the dressmaker with "padding." The treatment is just as in *a.*, with the addition of a well-made but ordinary corset. Over-support, taking all the work from the patient's muscles, is in these cases to be as strongly deprecated as their total neglect. *c. Curvature and rotation present but slight: Spine straightens in the Tripod Swing* (*Sayre's*) : *Deformity augmenting : Case not over a Year's Standing.*—Here the plaster-jacket (entire, not laced on, nor the poroplastic) is to be used, together with Sayre's calisthenic exercise. *d. Curvature, and especially Rotation, well marked: the latter, at least, not vanishing on Extension : Over a year's duration, and still augmenting.*—The treatment is just as in the last case, as long as any improvement is to be gained. *e. As Class d., or even worse; not augmenting: no Oppression of Abdominal or Thoracic Organs felt: Patient a useful member of society.*—There is no treatment; or at most calisthenic exercise, to develop the muscles and expand the chest. If support (*i. e.*, the jacket) be given, no permanent good result is obtained, save a temporary bolstering up, which patient most distressingly misses when removed. *f. As Class e., but with oppressed Breathing and Circulation: Intercostal Neuralgia. Thorough Invalids, and useless in society.*—Gradual use of Sayre's exercise; then a support, either of plaster-of-Paris or of felt. Outdoor exercise should be encouraged, the patient being thus supported. This treatment should be persevered in till a cessation in improvement appears. A permanent support of felt can be ordered if requisite.

Prognosis in General Curvature. After Treatment.—In classe *a.*, *b.*, and *c.*, a cure may be expected. It is astonishing in *b* how soon—three months—complete cure may be accomplished. In *c.*, the treatment on an average will last two years. In classes *c.* and *d.*, weaning from the plaster support must be carried out as in caries; while in *d.*, amelioration, and not cure, must generally be expected. The after-treatment in *c.* and *d.* consists in the "weaning" process, and the continuance of the swing exercise at least three months after all support has been stopped. Relapse in all these cases is very likely from any failure of the general health; they should be carefully watched for some months. Classes *e.* and *f.* are essentially examples of "after-treatment" from the first; the greatest gain expected in *f.* is the loss of subjective symptoms, and breaking the neck of invalidism. Cases of the class *d.* had better at once know what *e.* and *f.* already well have learnt, that some deformity, little or much, must be to them a "condition of life."—*Brit. Med. Jour.*, May 13.

ON THE VALUE OF IODOFORM AS A DRESSING FOR WOUNDS. BY H. B. SANDS, M. D., Surgeon to the Roosevelt Hospital, N. Y.

The chemical, physiological, antiseptic and toxic properties of iodoform have been minutely investigated by German observers. It contains ninety-six per cent. of iodine, is easily soluble in ether and in both the fixed and essential oils, of which alcohol is a more feeble solvent, and water dissolves only a trace of it. When in solution, it undergoes gradual decomposition, evolving iodine, to which its antiseptic properties are believed to be due. When, therefore, a wounded surface is covered with iodoform, a kind of antiseptic reservoir is established which, constantly and slowly giving off iodine in a nascent state, effectually hinders putrefactive changes in the wound. The development of bacteria is not always entirely prevented, but all other evidences of putrefaction are absent, and the wound remains wholly aseptic. It has been shown, however, that the action of the iodoform—owing to its slight solubility in water and in the animal fluids—although constant—is slow, contrasting in this respect, with the quick and energetic action of carbolic acid. Consequently it cannot be substituted for the latter in the disinfection of instruments, sponges, or the hands of the operator. Moreover, in the case of wounds intended to be closed, with the view of obtaining union by the first intention, carbolic acid, as a direct application to the cut surfaces, is preferable to iodoform, both for the reason above mentioned, and because the presence of the powder between the opposed surfaces interferes with primary adhesions.

The favorable local influence of iodoform when applied to open wounds, has been noticed by all surgeons who have employed it. The wound remains free from pain, the discharge is thin and scanty, the surrounding integument free from inflammatory swelling, and the formation of healthy granulations goes on rapidly and without interruption. The iodoform disappearing very slowly, infrequent dressings are sufficient, and until the reparative process is far advanced no change of treatment is rendered necessary. When, however, granulation is well established, and the wound has contracted in size, other applications are preferable to iodoform, which, perhaps, somewhat retards cicatrization. In the management of ordinary open wounds, its superiority to carbolic acid depends mainly on the fact that while the direct contact of the latter causes irritation and suppuration, iodoform has an opposite effect, restraining inflammation, and promoting the work of repair.

Iodoform is also imployed to advantage in certain situations where the use of carbolic acid would be either uncertain or dangerous—after operations on the rectum, such as the extirpation of cancerous growths, the difficulty of maintaining an aseptic condition of the wound by means of carbolic acid solutions is often insuperable, while a few applications of iodoform usually accomplishes this object with certainty and ease. Again, after operations for the removal of cancerous tumors of the tongue, the tonsils, the jaws or the floor of the mouth, disinfection of the wound, although extremely desirable, cannot be safely obtained by carbolic acid, on account of its poisonous properties; consequently the wound often becomes exceedingly offensive, and the patient is exposed to the double risk of septicæmia by direct absorption of septic products, and of becoming contaminated by inhaling or swallowing the putrescent fluid so abundantly secreted. In these cases iodoform has been used with signal success. The operation wound being plugged with a strip of gauze, impregnated with this substance, remains aseptic, and frequent removal of the dressing is unnecessary.

Iodoform has long been known as a valuable remedy when applied to unhealthy and fœtid ulcers; and its excellenee in this respect has been confirmed by recent observation.

In treating open wounds with iodoform I have followed the usual practice of covering the surface with a thin layer of the powder, dusted from a pepper-box, afterwards applying a layer of cheese cloth, a coat of absorbent cotton, a piece of gutta-percha tissue, and a bandage. In operation wounds intended to be closed with the object of obtaining union by adhesion, I have simply washed the wound with a solution of carbolic acid, and after uniting the edges with sutures, with or without the insertion of a drainage-tube, have covered the surface with half-a-dozen layers of cheese cloth, lightly dusted with powdered iodoform, over which were applied a mass of salicylated or absorbent cotton, a piece of gutta-percha tissue, and a gauze bandage. The dressings were usually renewed on the second or third day, and afterwards at longer or shorter intervals, according to circumstances. As a rule, the results have been entirely satisfactory, extensive amputation wounds uniting almost completely by the first intention, and invariably remaining aseptic.

Beside the larger operation wounds, I have treated with iodoform a great number of smaller wounds, and several cases of compound fracture with gratifying success. The remedy is easily applied; its antiseptic action is efficient, and its local action, unlike that of carbolic acid, is sedative and unirritating, even when directly in contact with a raw surface. Moreover, in endeavoring to procure union by the first intention, better coaptation can be secured by the even pressure of the cotton pads, than by the application of carbolized gauze, thereby favoring the chances of adhesion of the cut surfaces. I know of no other antiseptic dressing which is at the same time so comfortable and so efficient, and were it not for one drawback, I believe that it would soon be almost universally adopted

That iodoform possesses poisonous properties has long been know as experimental physiologists. Binz and Hogyes have shown that when administered in large doses to dogs and cats, it causes narcotism, and destroys life by paralyzing the nerve centres of respiration and circulation. In animals thus destroyed, the heart, liver, and kidneys have been found in a state of fatty degeneration. Similar effects have unfortunately been recently observed in the human subject, as the result of absorption of iodoform by wounded surfaces. It is remarkable that for some time after its introduction into general surgical practice, very few instances of its injurious action were observed, and that in the experience of some surgeons, poisoning is extremely rare. Hoeftmann reports that out of a thousand cases treated by iodoform in the hospital in Konigsberg, only two were thus affected, both, however, terminating fatally. With other observers, bad results have been more frequent, and various degrees of toxic action have been recorded. Attention having been directed to the dangers attending the use of the remedy, cases are rapidly multiplying to prove that it cannot be freely employed without the risk of fatal consequences.

In man, as in animals, poisonous doses of iodoform cause rapid and feeble heart-action, coma and paralysis of the organs of respiration. Autopsies have demonstrated in such cases the lesions of meningitis and fatty degenerations of the heart, liver and kidneys. But the most remarkable manifestations of poisoning in the human subjects are due to perverted cerebral action, taking the form of mental derangement. Every degree of intoxication has been observed, from simple exaggeration of nervous excitability to the condition of acute mania. In the lighter cases patients are restless and uncomfortable, complaining of headache, loss of appetite, wakefulness and the constant taste of iodoform. Such symptoms often, but not always, precede those which are met with in bad cases, which are nearly identical with the symptoms of delirium tremens. Profound mental despondency, inability to eat or sleep, spectral illusions, delirium more or less violent and suicidal propensities, are the most frequent manifestations of the morbid state. Sometimes the patient is noisy and abusive; at other times his actions are stealthy and he will endeavor to run from his bedroom or jump out of a window in order to escape from a fancied enemy. From such a condition many persons recover, while others die, often suddenly, from exhaustion or coma. No antidote to the poison has been discovered, and the only treatment of any avail is that of preventing further intoxication, and supporting the patient's vital powers by alcoholic stimulants until the crisis is past. Opium and bromide of potassium, even in large doses, usually fail to induce sleep, while chloral hydrate would be likely to paralyze the heart, already enfeebled.

I have observed several examples of the lighter form of iodoform poisoning in which the symptoms disappeared almost immediately after discontinuing the use of the drug.

I have seen also two cases of acute mania due to this cause, and until the second case occurred I failed to appreciate the nature of the morbid state, as I was unaware that this form of disease could be produced by iodoform.

Thus far it has not been ascertained definitely what amount of iodoform is necessary to cause poisoning, and the susceptibility to its action appears to vary greatly in different cases. In many instances iodoform has been freely applied to extensive open wounds with impunity, two or three ounces having been inserted into the wound immediately after an operation. In other cases, slight nervous symptoms have followed the application of a single gramme, while severe attacks of mania have been caused by doses of half an ounce and upward. In many of the German cases an excessive amount was employed, sometimes amounting to five or six ounces. The toxic effect depends much upon the extent of the absorbing surface, and a fresh wound will absorb more rapidly than one that is granulating. Old persons are especially liable to suffer from iodoform poisoning, while such is not the case with children, as far as can be inferred from the limited statistics thus far published. The subject of iodoform-poisoning is one of deep interest, and it is to be hoped that surgeons will promptly record the results of their investigations. It is already apparent that the sanguine expectations at first entertained regarding the value of this antiseptic cannot be fully realized, and that, in the present state of our knowledge, iodoform should be employed with great caution, and in such a manner that it can be readily removed from the wound in case the symptoms of poisoning should supervene. It is certainly hazardous to fill a large fresh wound with the powder, which may penetrate the meshes of the connective tissue so that it cannot be washed out. By employing it in the minimum quantity that will produce the desired effect, and by learning, perhaps, to recognize beforehand the class of cases that are peculiarly susceptible to its deleterious influence, we may yet be enabled to use with safety this antiseptic, which, in many respects, is the most valuable that has ever been introduced into surgical practice.—*Medical Record.*

THE TREATMENT OF COMPOUND FRACTURES OF THE LEG. BY ERSKINE MASON, M.D.

I have come to the conclusion that the plaster-of-Paris dressing in some one of its varieties, but chiefly the plaster bandage, with or without brackets, meets the indications in the majority of cases, either applied at once or later on in the case, better than any other appliance I have resorted to.

Where from various causes it would not be advisable to use the permanent dressing at once, in my hands no apparatus has seemed to give more comfort to the patient than the fracture-box, with the limb surrounded by bran, as first used, I believe, by Barton.

With reference to the plan of treating these cases by through-drainage, as lately described by Dr. Markoe, I possess full notes of but four cases. In all these cases I used it in connection with the plaster splint. From the results it has furnished in my hands, it has become a favorite mode of treatment with me.

Within the past few months two cases have been more or less under my observation where the old practice of sealing the wound was employed. The sealing, however, was done by means of protective and Lister's dressing employed, and the limb firmly bandaged. In one case the bandage used was of rubber. The limbs were then securely fixed in a fracture-box. Both tibia and fibula were broken in each case. The ages of the patients were forty-five and thirty-three years. In one case the fracture was caused by a heavy piece of timber falling upon the limb; in this instance there was a great deal of subcutaneous laceration, and there were two openings leading to the fractured bones, situated about three inches above the inner malleolus. The wound was dressed August 29, soon after the receipt of fracture. September 2 the elastic bandage was removed, and considerable pus found beneath the dressings, with two or three blebs on either side of the ankle. The limb being washed with a solution of carbolic acid, the same kind of dressings were applied, save the rubber bandage. September 16 Lister dressing was removed; wounds found closed; limb allowed to remain in the fracture-box until October 6, when it was placed in plaster, and the patient permitted to go about. With respect to his temperature, it was 100° on the evening of the first day; on the evening of the second day it was 101°; after that it was normal throughout the treatment of the case.

In the other case the fracture was produced by the kick of a horse. There were two wounds about two inches above the external malleolus, the laceration of soft parts was less than in the previous case. The case came under treatment shortly after receipt of injury, on August 27. But one dressing (Lister) was used, this being removed September 15, and the wound found closed. October 4 a plaster splint was applied, and patient allowed to move about. In this instance there was no rise of temperature.

The two cases whose histories I have given were certainly such as I of late have been accustomed to treat with drainage-tubes introduced at the first dressing; and I watched their progress with much interest. They have certainly have gone far to confirm what my observations have for some time been leading me to entertain, namely, that at present we are apt to be too free in the use of the drainage-tube in these cases, at least we resort to them too freely in many cases immediately upon the receipt of injury. We introduce them to anticipate the burrowing of pus, and to remove as expeditiously as possible the discharge we expect to take place. Whereas the presence of these very tubes, when too freely used, I feel sure, at times have by their presence in the soft parts invited the secretion of pus, and kept up the discharge which we desire to avoid. Certainly, I have seen two and three tubes introduced at once where I feel certain that one for the present would have sufficed; if indications for more arise, they may be introduced later without detriment to the case.

One other point with reference to drainage-tubes. I fear that in many instances we allow them to remain too long, and, acting as foreign bodies (which they are), tend to keep up a discharge, and delay the conversion of a compound into a simple fracture. Again, when left in a long time, their tracts through the soft parts acquire callous walls, which sinuses, after the removal of the tubes, are long in closing.

Of thirty cases of compound fracture of the bones of the leg, we find sixteen of the tibia, three of the fibula, while of both tibia and fibula there are eleven. Seven of these cases required amputation. Of primary amputations there were five, three of which recovered, while two died—one from delirium tremens, the other from erysipelas and alcoholism. Of secondary amputation there were two cases. Both recovered.

Eighteen of these cases were treated in plaster-of-Paris dressings—either by the bandage alone or else strengthened and assisted by brackets, as the cases seemed to require. Nine of these cases were put up in the permanent dressings at once, and nine after the lapse of some days after the injury, the average being about the twenty-fourth day.

In those cases where the apparatus was applied immediately, the average day of its removal was the twenty-fourth; while in those cases where there was necessary delay before plaster could be used, the average period of removal was the thirty-eighth day.

In those cases where the splint was applied after the lapse of some days, we find, in several instances, it had to be removed and reapplied. The causes for which we find to be in one case the splint being too loose, one from pain, one from ulceration, one from unpleasant odor arising from the splint, one from erysipelas, and one from no union.

Among these eighteen cases we find four deaths.

One from pyæmia on the eighth day. This fracture was caused by a heavy weight falling upon the upper third of the leg. Hæmorrhage was severe, and only arrested by compresses or cotton with persulphate of iron. Pulsation in both tibials was felt at the foot. Gangrene set in on the fifth day, rapidly extending, so as to involve the whole thigh.

One from shock and repeated hæmorrhages, traumatic delirium. Died on the fourth day.

One from alcoholism. Death on the seventh day.

One from erysipelas. Death on the sixty-first day.

The length of time that these patients were under treatment, viz., from the time of their accident to the day of their discharge, we find the average to be eighty-two days.

Four cases were treated by the method known as through-drainage (Markoe), viz., plaster bandage, drainage tubes, and frequent washings with carbolic acid. The average duration of these cases was forty-nine days. Several other cases I have treated by the same method, and my impression is that they have all done well. Not possessing full notes of them they are omitted in this table.

Five cases were treated upon Volkmann's posterior tin splint, with jute and strict Lister dressings. We find in these the average number of days of treatment to be sixty.

Among these five cases are recorded two deaths. One from pleurisy, pneumonia, septicæmia on the eighth day. The other of erysipelas upon the seventy-eighth day. This case, however, was not treated throughout upon Volkmann's splint. Union being delayed, this splint was changed to one of plaster. On the sixty-third day some sequestra were removed, splint reapplied, and erysipelas set in on the seventy-third day. In several of these cases fragments of bone were removed at various times.

In a large proportion of all these cases antiseptic treatment has been employed.—*Medical News.*

Intestinal Function.—An almost un touched field has been explored by Nothnagel, in his latest study of intestinal function. Of the effect of various chemical substances on unstriated muscle we know almost nothing, and this has been the subject of his investigations, the results of which are of great interest as well as of novelty. The investigations were made on etherized rabbits, the open abdomen being immersed in a warm neutral solution, and the substance to be tried was gently placed in a solid form, on the external surface of the bowel. It was previously ascertained that the mechanical irritation thus caused was too slight to produce any effect on the muscular tissue.

The first important fact ascertained was that there is a fundamental difference in the action of potash and soda salts, and that this difference depends on the alkali, being irrespective of the combination in which the alkali happens to be. However similar, for instance, in general action is bromide of potassium to bromide of sodium, there is a marked contrast in their effect on the intestine, due to the basic alkali, If a salt of potash is placed on any part of the bowel, large or small (the cæcum for the present being excluded), a strong muscular contraction results, which remains limited to the part touched, or merely extends around the intestine in an annular form. On the other hand, if a soda salt is employed, a contraction is produced which does not remain limited to the spot, but extends from it for several centimetres, and always upwards, towards the pylorus. The result is uniform in cats as well as in rabbits, and there is no reason to suppose that it is not true also for the human intestine. The fact may sometimes be of use to operators. If, for instance, a small piece of the bowel is exposed and it is desired to know which is the upper and which is the lower portion, all that is necessary is to place upon it a fragment of common salt—a perfectly harmless proceeding—and a contraction will occur, and will pass invariably upwards.

The contraction produced by potash, although so limited, is very energetic, completely emptying the bowel at the spot, and the local contracted part may be concealed, being overlapped by the adjacent uncontracted part, so abruptly limited is the contraction. The local contraction does not seem to set up actual peristaltic action, any slight movement of this character which is observed being apparently due to the distension of the bowel above by the interference with movement of the contents. In order to produce the contraction, the potash salt need not remain in contact more than from half a second to one second, and the interval between the commencement of contact and of contraction is from one-eighth to six-eighths of a second. The contraction always begins at the spot touched. On the other hand, in the case of the soda salts, the contraction sometimes begins at the spot touched, but very often a few millimetres higher up, the spot actually touched remaining uncontracted, a phenomenon never observed with potash salts. The contraction then extends upwards as already mentioned, until six or eight centimetres of the intestine may be reduced to a pale empty cord. The constriction lasts from five to thirty seconds, and then goes off gradually with some slightly irregular peristaltic waves. The duration and intensity of the effect seem to depend to some extent on the degree of irritability. Below the point of application the bowel is for the most part still. The application of the soda salt to the cæcum has almost no effect. A very short application of a soda salt to any part, for less than one second, often has no result. The application has usually to last for two or three seconds. The latent period before contraction begins is from two to ten seconds. The contraction does not last so long as that which is produced by the potash salt. Experiments on cats yielded similar results, the only difference observed depending apparently on the greater development of muscular tissue in the intestine of the cat.

Observations on the action of other substances showed that only ammonium compounds produce the same effect as the soda salts—*i. e.*, an ascending contraction. All other substances examined have a different effect. Common alum causes a slow and comparatively feeble contraction, remaining limited to the point to which the stimulation was applied. The effect of magnesic chloride and sulphate is uncertain; sometimes they cause a local contraction, sometimes none at all. Chloride of calcium produces a somewhat stronger contraction than chloride of magnesium, but sulphate of copper, chloride of silver, and acetate of lead, produce only a local contraction, which comes on slowly and lasts a long time, often several minutes. Sugar and urea have no effect. It is very remarkable that the action of the sulphates of potash, soda, and magnesia, when applied to the outside of the bowel, should be so widely different, although each produces the same effect when taken internally.

In considering the mode in which the effects were produced, only the effects of the compounds of potash and soda were considered. The first question was whether the contractions were to be regarded as the direct result of the stimulation of the muscular fibres, or as the effect of the excitation of any nervous elements. The local character of the contraction produced by potash makes it probable that the action is the result of the local stimulation of the muscular fibres. Nothnagel believes that the soda salts exert an influence, although feebly, on the muscular fibres, but it is very difficult to decide whether the special ascending contraction of the soda salts is or is not due to a nervous mechanism. That it is, is suggested by the striking difference from the contraction produced by the potash salts. Experiments showed, however, that the contraction occurs even when the nerves of the mesentery have been divided, and the only nervous mechanism which could co-operate in producing the contraction is the ganglionic arrangement in the wall of the bowel itself. That it does depend on this mechanism is probable from the considerations, first, that the contraction begins not at, but a little above, the point touched; secondly, the longer latent interval; and thirdly, the fact that after the *post-mortem* peristaltic action has ceased, potash salts still cause the local contraction, and a similar contraction can sometimes be caused by soda, but never the characteristic ascending contraction.

A large number of experiments were made on other organs which are furnished with involuntary muscular fibres, under the same conditions. In the bladder the soda salts caused only a feeble and local contraction, while the potash salts had a much more energetic effect, producing an alteration in the shape of the bladder and not unfrequently the expulsion of some of its contents. Applied to the stomach both salts cause only a local contraction, which is sometimes absent when the soda salt is used. Neither caused any appearance of peristaltic waves. These results show that the potash salt has a more energetic local action on the bladder and stomach than the soda salt, and agree with effect on the intestine if the ascending contraction, observed in the latter, is regarded as produced through the nervous mechanism, and to this view they therefore give indirect support. How this local stimulation is produced is, however, obscure. That it is not due to the simple withdrawal of water is evident from the trifling effect of the chlorides of calcium and magnesium. Still more surprising and mysterious, however, is the remarkable fact that the contraction produced (probably through the nervous structures) by the soda salts should pass invariably upwards. The fact is one which cannot be correlated with any other known facts in the physiology of the intestine, and it affords a glimpse into a class of phenomena of which at present we apparently know nothing.—*Lancet.*

Observations on the Use of Hypophosphites in the treatment of Phthisis Pulmonalis. By John C. Thorowgood, M.D., F.R.C.P., Physician to Victoria Park Hospital for Diseases of the Chest, Lecturer on Materia Medica at the Middlesex Hospital.

I would preface the few remarks which I am about to make on the use of the above named remedies in the treatment of pulmonary consumption, by stating that I have no intention of putting them forward as specifics for the cure of phthisis. I find that an experience of seventeen years among the patients of a hospital specially devoted to the treatment of diseases of the chest gives very little encouragement to a belief in a specific cure for consumption, though I willingly admit that one does learn something of the special sphere and power of action of certain drugs as agents of more or less value in the treatment of pulmonary disease in the various forms and stages. What I claim for certain of the hypophosphite salts is, that they are worthy of a place high in the list of our medicines for consumption. My own experience, dating from 1863, would lead me now to say that I know of no remedies so generally applicable and beneficial in the treatment of phthisis as are the hypophosphites.

I had in my mind the idea that true tuberculosis, in the form of gray miliary tubercle, was a disease in which the nervous system was much concerned. My reason for this opinion was that the disease is apt to come on in an acute form in cases where there has been great nervous strain or exhaustion.

Two of the most hopeless and rapidly fatal cases of this acute tuberculosis that I have met with came on in the cases of two young ladies, not relatives, each of whom had been working very hard for a competitive examination, and so had undergone much exhaustion of nerve-force.

The affinity, too, of miliary tubercler for affecting the nervous system is much; for, in many cases, miliary tuberculosis manifests itself only in the form of a basilar meningitis. Considering these points, I thought phosphorus and hypophosphites might be valuable in restoring the exhausted nerve-force.

Against these ideas of mine as to the nervous origin of miliary tubercle, we have to place the observations of Buhl and others, who regard miliary tuberculosis as an infective disease, produced by auto-inoculation from caseous matter in the body. I do not, however, give my implicit adhesion to this statement, if it be held to mean that we never get miliary tuberculosis unless some caseous deposit, or other infecting centre, be present somewhere in the body. In proof of this statement, I would take the case of one of the young ladies just referred to. She fell ill May 14th, and died on June 1st; and a careful *post mortem* examination by Dr. Peacock showed both lungs airless and filled with small miliary tubercles, none of which had undergone any softening process. We do not hear of any caseation or softening, while the history tells of much nervous strain and exhaustion as the cause of the disease. To go further into the nervous origin of miliary tuberculosis will lead me away from the more practical object of my paper; I will therefore now endeavor to show in what form of phthisis I have found hypophosphites useful medicines.

I will give, first, examples of the effect of hypophosphite salts in cases of strumous or scrofulous pneumonia. It is well known how, in a scrofulous subject, a pneumonia is very protracted. The infiltration of lung subsides very slowly, or it may remain stationary, and undergo regressive metamorphosis of a cheesy character. A scrofulous catarrh persists, with abundant cell-formation, and a cellular infiltration penetrates deeply into the submucous tissue of the lung; thus the wall of the air-cell is destroyed, and a true phthisis pulmonalis, or lung-consumption, is established. Secondary to this, we may have miliary tubercle, the seat of which formation is the subepithelial connective tissue, and also the lymphatics of the lung.

Illustrations of this kind of lung-disease are very common among badly-fed children who come to the hospitals, and also the same kind of disorder is by no means unknown among the better classes. A child passes through an attack of measles, and gets a cough and pulmonary congestion that do not pass away. Cod-liver oil, iron, and sea-air may, after a while, effect a cure; but I have never seen such good results from the two first named remedies as I have seen follow the administration of hypophosphite of soda and hypophosphite of lime.

This is the sort of case to illustrate what I have just said. Miss Eva H. was seen by me April 1st, 1874 She was then convalescent from an attack of measles, but an obstinate cough remained, with some feverishness. There was dulness with tubular breathing at the upper part of the left lung, and the note in my book says, "pneumonic deposit at left apex." Nitric acid was taken for ten days, and then, as the physical condition of the lung was in no way changed, two grains of hypophosphite of lime with glycerine and water were given and the child went to Eastbourne.

June 5th. I found her better, and the pulmonary condition on the left side improved, but she was still feverish and still had a cough, while I found some impaired resonance at the base of the right lung, with a slight crepitant *rale.* Hypophosphite of soda was given in two-grain doses, and in a couple of months the signs at the right base were gone, and the dulness at the upper left chest had diminished notably. This little girl went on well till she got scarlatina in February, 1880, and on the 21st of that month I was asked to see her with Mr. Kingston Barton. When I saw her, the rash of the fever was subsiding, but she had a temperature of 104°, pulse 14, respirations 48. Much crepitation was now heard over the apex of the left lung, as if old mischief had been set going again by the fever. She had slight albuminuria, and casts of blood-corpuscles were seen in the urinary sediment. The only remedy that the stomach would retain was three or four drops of nepenthe at bed-time. Quinine, digitalis, and belladonna were tried and failed. On July 28th we began two grains of hypophosphite of lime in glycerine and water, and it kept down well. On Tuesday, March 2d, after being at the point of death, with a temperature of 104°, for about four days, a crisis took place. Temperature fell to 101°, pulse 115; there was still much crepitation in the upper left lung; respiration on the right side was loud and puerile. Hypophosphite of lime was continued till the end of March and then the cough had ceased. The left upper chest was somewhat fallen in, the breath-sound was tubular, almost free from crepitant sounds, and the patient has done well ever since. A marked pulsation of the left auricle could be seen in the chest, due to some contraction of upper left lung.

A favorable result, therefore, in this case was associated with the continuous administration of two grains of hypophosphite of lime, after the unmistakable failure of other approved remedies.

The case of Timothy S., in Victoria Park Hospital, is another one to illustrate the good effect of hypophosphite of lime. The patient was ten years old, and his illness began with a troublesome cough. On April 23rd, 1874, he had dulness at the left base, with crepitant *rales.* He took daily three grains of hypophosphite of lime, and by July 30th had gained flesh and lost all his morbid pulmonary sounds.

The case of William P., one of the first I treated with hypophosphite of lime, impressed me much. William P. came to Victoria Park Hospital December 14th 1863, with severe cough, much expectoration, much loss of flesh, and bad diarrhœa. He had been ill three years, and had taken much cod-liver-oil. I ordered him five grains of hypophosphite of lime, one fluid ounce of decoction of cinchona, and two drachms of cod-liver oil three times daily.

January 11th, 1864. He felt much better, Pulse 96. Expectoration was very much less. Diarrhœa had ceased. Cavernous sounds and large crepitation were heard at the upper part of the left lung. He was ordered fifteen minims of tincture of iron three times daily. In a week he returned worse in every respect; the diarrhœa was as bad as ever. The hypophosphite of lime was resumed, and on it he again improved very markedly.

The case of Minnie S., who has just left the hospital, deserves a word of notice. This girl comes of a consumptive family, and has always had some cough. After an attack of measles, she was laid up with severe cough and congestion of left lung. Fourteen days afterwards, on November 13th, 1880, she came into Victoria Park Hospital with much cough and expectoration, and a temperature of 102°. The left lung was dull, and full of crepitant *rales* in its upper part. She took regularly three grains of the hypophosphite of lime for six weeks, and lately she has been taking some of Burrough's iron and beef wine. She has gained about ten pounds in weight, and, though the dulness at the upper left lung is not gone, yet the crepitant *rales* are scanty, her cough causes her hardly any trouble, her pulse is quiet, and she can run about like a child in perfect health.

I should have liked to be able to give you a few more cases to show how well the hypophosphites answer in curing caseous and scrofulous pneumonia of the apex of the left lung. Croupous ordinary pneumonia of the base I believe very rarely to lead to phthisis, but catarrhal pneumonia of the apex is very apt indeed, especially in young scrofulous persons, to lead to destruction of lung substance; and it is in these cases, where cell-products accumulate in the alveoli and bronchioles that both phosphorus and hypophosphites are unsurpassed in curative action by any remedy with which I am, as yet, acquainted. Nor am I singular in this belief; my friend and colleague at Victoria Park Hospital, Dr. Eustace Smith, has said to me, and has said also in his *Clinical Studies on the Diseases of Children*, pp. 178, 289, that, where softening in a deposit has begun, the effect of hypophosphite of lime is often very remarkable; and again, page 289, speaking of pneumonic phthisis, Dr. Smith says "The effect of the hypophosphites seems at times almost magical; but in true gray tuberculosis they, in common with quinine, digitalis, and other remedies, are of small avail."

Thus I have briefly endeavored to show the indications for the employment of the hypophosphites in phthisis pulmonalis. Most useful medicines I have found them; never have I seen any injurious effects follow their administration, and all I would say in conclusion to anyone who is disposed to try these salts is—Examine well the patient and see if he have any hepatic or renal disease complicating his lung-affection, and then test your hypophosphite to see if it ignites readily when heated. Lastly, give the salt in as simple a form as possible. A little bicarbonate of soda may be added to the soda salt, and some liquor calcis saccharatus to the lime salt; and then let simple water, or syrup and water, form the vehicle for administration.

PHTHISIS: ON THE THEORY OF INFECTION, AND ITS INFLUENCE UPON TREATMENT.

By W. R. THOMAS, M.D., M. R C.P., Physician to the Sheffield Public Hospital, Lecturer on Medicine, Sheffield Medical School.

I so frequently meet with patients suffering from phthisis in whom no hereditary tendency whatever can be traced, but who have lived with another or others who have suffered from the same complaint, that I cannot help thinking that the disease must be infectious; more especially as, in many, what we consider to be the predisposing and exciting causes have not been present to any great extent.

Now, if phthisis be infectious, and if we can satisfy ourselves by careful observation that it is, that knowledge alone will enable us, by recommending certain precautions to be taken, to save the lives of thousands who might in the future, being ignorant of the fact, expose themselves to the infection, and ultimately die of the complaint.

The following are examples of cases to which I have before referred:

A. A married woman, aged 30, has extensive deposit in the upper part of her left lung. Her husband died, eight months ago, of phthisis, and she has never been well since.

B. A phthisical young man, aged 24, slept with another young man for two years, who afterwards died of phthisis. He has never felt well since; he gave up living with his friend two years ago.

C. A young man, about 30, is decidedly consumptive; his wife died about eight months ago of the same complaint.

D. A widow, aged 26, has a cavity in her right lung. Her husband died of phthisis twelve months ago, and her child of tabes mesenterica fifteen months ago.

In all these cases, the family history was favorable. Of course, such patients are often exposed to the ordinary causes of phthisis. Watching, worry, and want, tend to produce it; but cases of death from phthisis occur so often among those who have attended upon phthisical patients, that I cannot help thinking that there must be some cause for the frequency which we do not now appreciate, and that probably many of the cases now deemed to be hereditary, are owing to infection.

For years, we have been in the habit of reading, and now read, of dogs who, after licking the phlegm expectorated by a phthisical master or mistress, have died of the same complaint; proving that the act of swallowing, or inhaling, or both, reproduced the disease in the animal.

Dr. Tappeiner, mixed half a gramme of pus from a tubercular lung with one hundred grammes of water, and made dogs inhale the atomized mixture for a quarter of an hour daily for ten days; this produced cough, loss of weight, etc. The animals were then killed. Those killed before the nineteenth day presented no tubercles whatever. Those killed after the twenty-third day presented tubercular nodules, proved to be such by microscopical examination of the lungs and spleen. Other dogs were treated in the same way with pus from scrofulous abscesses and bronchitis, but no tubercular mischief whatever was produced by such pus.

Some maintain that, in phthisis, the morbid process begins with proliferation of the connective tissue elements of the outer walls of blood-vessels; and that this action gradually involves the surrounding cellular tissues. Dr. Burdon Sanderson maintains that the disease begins with proliferation of cells of adenoid tissue, which is abundant everywhere, and often connected with the walls of blood vessels. Dr. Klein says that the first changes take place in the alveoli and interalveolar septa ; that the epithelial cells become enlarged and detached; that they then proliferate; and that, either by their coalescence, or by the enlargement of one, a multinuclear cell is formed; and that degenerative changes take place afterwards.

Probably all these theories are correct; and it may be that certain irritating particles, when they come into contact with the delicate lining membrane of the tubes and alveoli, produce proliferation of cellular tissue corpuscles, of cells of lymphatics, and of epithelial cells as well.

Now, if it be true that phthisis is infectious, not only may we be able to adopt certain precautions to prevent infection, but our treatment also may be influenced by our belief. We know full well that there are certain medicines which are known to be poisonous to some of the lowest forms of life; and such remedies, when inhaled, may act beneficially. Inded, phthisical patients are regularly recommended by our best authorities to take long sea-voyages, and they often return much improved; and we naturally believe that the mode of living and the pure sea-air has cured the complaint. Is it not possible that the constant inhalation of an atmosphere impregnated with tar has had much to do with the cure?

Lately, I have been in the habit of recommending phthisical patients to use a medicated respirator; and the majority have certainly confessed that such use has lessened the cough and amount of expectoration to a remarkable extent. I have seen patients who have had most decided symptoms of phthisis, in the first and second stages, almost entirely recover. All the symptoms have disappeared, and nearly all the physical signs, to such an extent that they have been able to return to their former occupations. Certainly I have, in these cases, tried to improve the general health by other treatment as well; and I have seen cases of phthisis recover under such other treatment before; but, the difference in the number of successful cases has been so great, that one must come to the conclusion that the inhalation has had much to do with the recovery.

Dr. Mackenzie of Edinburgh has described an admirable naso-oral respirator, which acts well. It has two lateral expiratory valves, and two anterior; in front of the latter is a small covered chamber, in which the piece of medicated sponge can be placed.

We are apt to discard all new theories and all new methods of treatment, and we are not alone. Those who have gone before us have done likewise. We see theories, propounded by some, years ago, and then not received, brought forward in our day with additional explanations, and at once accepted by the profession. We know of remedies, recommended most earnestly by some before we were born, and then rejected, now-a-days brought before the notice of the profession, and becoming generally used. Owing to our advanced knowledge, we can now see what could not be appreciated before; and, in the interim, thousands have died whose lives might have been saved.

HOUR-GLASS CONTRACTION OF THE UTERUS TREATED WITH NITRITE OF AMYL. By FANCOURT BARNES, M. D., M. R. C. P., Physician to the British Lying-in Hospital; Assistant Physician to the Royal Maternity Charity.

I was called, at ten o'clock in the morning on February 28th last, by one of the midwives of the Royal Maternity Charity to a patient with retained placenta. On my arrival, I found that the patient, a secundipara, aged 22, had been delivered naturally at three o'clock in the morning of a female living child. The midwife stated that she sent for me, because she had been unable to deliver the placenta. On examination, I found that the umbilical cord had been separated from the placenta. The external os uteri was quite dilated, as was the cervical cavity; but the os internum and the circle of muscular fibres above it, called Bandl's ring, the chief seat of hour-glass contraction, were firmly contracted, and only admitted a finger, by which the placenta could be felt in the uterus. I now learnt that the midwife, hoping to accelerate the third stage of labor, had given the patient a dose of ergot as soon as the child was born. I found it impossible to get my hand into the uterus to deliver the placenta. Bearing in mind the remarkable power which nitrite of amyl possesses in relaxing tension in the blood-vessels, I determined to test its action on the uterine spasm. The patient had three drops of the nitrite of amyl given her on a handkerchief to inhale, by Mr. Lingard. During the inhalation, the ring of muscular fibres round the os internum, which had been so rigid as to be absolutely undilatable, steadily yielded, until I could pass the whole hand into the uterus and detach the placenta, which was universally adherent. There was no hæmorrhage whatever, and the placenta itself presented a remarkably exsanguine appearance. On referring to the third edition of my father's work on *Obstetric Operations*, I found the following : "We possess in ergot a great, a dangerous power of augmenting the force of the uterus. We want an agent endowed with the opposite effect, that will control and suppress uterine action. I consulted Dr. Richardson on this point. He tells me the desired power exists in the nitrite of amyl. Three minims of this added to one drachm of ether taken by inhalation is the form he recommends. It does not produce unconsciousness ; but it is an anæsthetic as well as a sedative of muscular action. It is an antidote or opposite force to ergot. In it we have the desiderated 'epechontocic agent.'" In the case in question, the drug certainly acted admirably. It relaxed the irregular contraction of the uterus, and acted as a sedative and anæsthetic without producing unconsciousness. The case is also instructive as an example of the dangers which may result from the administration of ergot before the expulsion of the placenta. The tetanic action was no doubt increased by the traction which had been made on the cord. It is well known that ergot, when given before the birth of the child, may cause its death. I believe this results from the blood being squeezed out of the placenta by the uterus. Although in cases of irregular contraction of the uterus that organ is firmly contracted, the contraction docs not separate the placenta. On the contrary, in the cases I have seen, the placenta has been firmly adherent, as it was in this case. I am not aware that nitrite of amyl has been used to relax uterine spasm before. In it we possess, I think, a new and trustworthy addition to the resources at command for overcoming spasmodic or trismic contractions, which will not always yield to other remedies.—*Glasgow Jour.*

INOCULATION OF LEPROSY.—A recent number of Virchow s *Archiv* (vol. lxxxviii 1882) contains an account, by Professor Kobner of Berlin, of attempts to inoculate leprosy on animals. Although the results were negative, the experiments are of considerable interest. Professor Kobner confirms fully the observations of Hansen, Neisser, and others, in reference to the bacillus of leprosy. He not only found the organism in fresh juice from the tubercles, but found it in preparations which had been many years in alcohol, and still more easily in dried portions of leprosy-tissue which had been kept folded in paper for an equally long time ; so much so, that he recommends travelers in countries in which leprosy is common to preserve the tissues in a dried state, in so far as they wish to keep them for subsequent examination in reference to the bacillus. A tubercle was excised from the thigh of a patient, a German, of healthy family, who had contracted the disease during an eleven years' residence in Pernambuco. Inoculations with the juice and with small portions of the excised tissue were made on a monkey, two guinea-pigs two young rats, a white mouse, two rabbits. a pigeon, three eels, a mud fish, and a frog, The monkey died 126 days afterwards of tuberculosis, but no leprosy-tissue was found, any more than in any other of the inoculated animals. One of the rabbits died on the fifty-sixth day, the other was killed after five months and a half. The inoculations in the case of those animals had been made by inserting small pieces of leprosy-tissue into the anterior chamber of the eye. Those portions of tissue remained visible, and gave rise to no inflammatory symptoms. After being 56 days immersed in aqueous humor the leprosy bacilli were well preserved and easily demonstrated, but they had not grown into the tissues of the iris or cornea. In preparations of dried blood, prepared by Ehrlich's method, Professor Kobner demonstrated that the bacilli are present in the circulating fluid. So far from considering the results of his negative experiments as conclusive, Professor Kobner refers to the time that elapsed before tuberculosis, recurrent fever, and septicæmia were successfully inoculated on animals. Further experiments of the kind are certainly desirable, and the attention of medical men practising in countries in which leprosy is common may be advantageously directed to this question.—*Dublin Jour.*

The process of the coagulation of the blood is of the highest practical importance in surgical pathology, in connection with the means by which hæmorrhage is arrested. In this special relation the process has been recently studied by Hayem, whose previous investigations on the physiology and histology of the blood have supplied important additions to our knowledge. These latest researches of Hayem formed the subject of a recent communication to the Paris Académie des Sciences. They relate especially to the part played by the minute corpuscles to which he has given the name of "hæmatoblasts," a subject which is of interest in connection with the views of Bizzozero on the influence of his blutplattchen on the process of coagulation, to which we lately called attention. Hayem pointed out that Andral, long ago, noted in the superficial layer of blood standing in a vessel, whether pure or mixed with a solution of sulphate of soda, innumerable minute white corpuscles 1-500th of a millimetre in diameter, around which the filaments of fibrin form. Vulpian, in 1873, observed that some of these filaments seem to proceed from the corpuscles, and Ranvier expressed the opinion that these minute bodies were merely small masses of fibrin, which become centres of coagulation. Hayem, however, believes that the elements described by these and other authors are merely altered forms of the hæmatoblasts which he described in 1874, and which undergo almost instantaneous change when removed from the body. He has shown that these elements, under abnormal circumstances, possess remarkable viscosity adhering to one another and to foreign bodies, and that this is the first of a series of changes consequent on which they become the points of origin and of attachment of the filaments of the fibrinous meshwork. Further, he now shows that all the conditions which retard or prevent the coagulation of the blood hinder the alterations in the hæmatoblasts, while influences which facilitate the latter also promote coagulation, a method of proof the same as had been previously adopted by Bizzozero. These considerations make it probable that the hæmatoblasts take an active part in the formation of clot which arrests the hæmorrhage from a divided vessel, and of this Hayem now furnishes conclusive proof. Such hæmorrhage, rapid at first, gradually becomes slower, and finally ceases. The diminution and arrest cannot be explained by the mere contraction of the wall of the vessel, which, although strong in the arteries, is absent in the veins, and could not by itself close the vessel entirely. The actual arrest is by the coagulation of the blood, although it is not easy at first to see why such coagulation should occur at the open mouth of a vessel through which a stream of blood is flowing, and in which, therefore, no stasis takes place. If an incision is made into the jugular vein of a dog, and a ligature be placed on the peripheral portion of the vessel as soon as the hæmorrhage has ceased a small clot can be extracted from the wound. This clot has the form of a nail, of which the point penetrates into the lumen of the vessel, while the head rests on the outer wall of the vein. If the coagulum is plunged into a liquid which fixes the elements of the blood, it can be thoroughly examined. The point and middle part are greyish, viscous, and composed of a material partly granular and partly amorphous. The granules are constituted by enormous quantities of hæmatoblasts, already altered, but still distinct and separate, while the amorphous material results from the confluence of hæmatoblasts which have undergone still more alteration. The head of the coagulum is red externally, and contains in the centre a prolongation of the viscid hæmatoblastic material, and at the periphery a large number of red globules are contained in fibrillary meshes. In the central portion, which really closes the wound, very few white corpuscles can be perceived. It thus appears that the fibrin is added to an original nucleus, which consists almost exclusively of hæmatoblasts. The formation of this may be watched in the mesentery of the frog. A small vein having been brought into the field of the microscope, it is divided incompletely by means of the point of a small scalpel. The free flow of blood from it soon lessens, the orifice being narrowed by a mass of elements which collect and adhere at the opening of the vessel. In a few moments the opening is covered by a whitish mass, into which the red corpuscles enter with difficulty. Instead of being formed by white corpuscles, as many observers state, this mass is formed exclusively of hæmatoblasts, which are arrested during the flow of blood. At the moment at which the hæmorrhage ceases, these elements are already considerably altered, and undergo further changes beneath the eye of the observer. This hæmatoblastic aggregation contains only a small proportion of white corpuscles. These are spherical, smooth on the surface, and not adhesive, since if the observation is prolonged for a short time, they may be seen to make their way out of the hæmatoblastic mass by their amœboid activity. They appear to take no part in affecting the arrest of hæmorrhage, and present their normal physiological properties and anatomical characteristics at a period at which the hæmatoblasts are profoundly altered.

In this process the edges of the wound in the vessel appear to act as a foreign body. The hæmatoblasts behave in precisely the same way to an actual foreign body which is introduced into the current of blood. A metallic thread was passed into the external jugular vein of a dog, by means of an extremely fine needle, so that scarcely a drop of blood escaped. At the end of two or three minutes the segment of vein traversed by the wire was emptied by means of two ligatures, one placed on the peripheral and the other on the central portion, and was then excised and opened after having been placed in a liquid capable of fixing the elements of the blood. The wire was already covered by a thin grey layer composed of innumerable hæmatoblasts, individually the more distinct the shorter the time that the wire remained in the vessel. If the wire was for a considerable time in contact with the blood, the collection upon it had precisely the character of the mass which closes a divided vessel.

Thus the essential part of the process of the arrest of hæmorrhage appears to be played by the hæmatoblasts, which when they arrive at the edge of the wound become adhesive and collect on it as they would on a foreign body, and to this collection other similar elements are being constantly added from the current of the blood, until the opening is closed and the flow of blood arrested. The other elements in the blood, and the formation of fibrin, only participate in the process in an accessory and secondary manner. The blood contains within itself its hæmostatic ; and if all these elements could be conceived to be absent from the blood, the tendency of hæmorrhage to spontaneous arrest would cease.

These facts have an important practical application. Since all foreign bodies alter and retain the hæmatoblasts, and since an abnormal condition of the vascular wall seems to have the same action as a foreign body, we can understand why intravascular coagulation occurs upon a portion of the wall of the vessels of the heart which has been altered by disease. So, too, we can understand the hæmostatic action of foreign bodies placed in contact with the surface of a wound, especially powdered or spongy substances, which may serve to collect the hæmatoblasts of the blood. These elements undergo changes the more rapidly under the influence of warmth, and this Hayem thinks may explain the effect of injections of warm water in arresting hæmorrhage ; but in this the influence of the vaso-motor system no doubt modifies the result. In animals it has been found that the more slowly the blood coagulates the less readily do the hæmatoblasts undergo modification. Since these elements may undergo alterations in quantity and quality in various diseases, we can understand that these modifications in the blood may predispose to hæmorrhages on the slightest vascular lesion. Hayem throws out the suggestion that hæmophilia, the pathology of which has hitherto eluded discovery so completely, may be merely the consequence, or rather the expression of some peculiar condition of the hæmatoblasts. He relates the case of a man, aged fifty years, who was almost dead in consequence of an extreme epistaxis, to which he had been liable for thirty years. An examination of the blood showed a remarkable paucity of hæmatoblasts, which, moreover, underwent changes far less readily than in the normal condition. To this Hayem attributed the obstinate hæmorrhage, which for three weeks had been renewed whenever the plugs were removed from the nostrils. He therefore proposed to transfuse a quantity of normal human blood, which containing active hæmatoblasts, might restore to the blood its coagulating power. One hundred and twenty grammes of blood were, therefore, injected, with the effect of immediately arresting the hæmorrhage. After the operation the plugs were removed from the nostrils, but not a drop of blood was subsequently lost. These facts are certainly remarkable, and, taken in conjunction with those described by Norris and Bizzozero, constitute an important addition to our knowledge of the mechanism of the arrest of hæmorrhage.—*The Lancet.*

ABSTRACTS.

"Qui e nuce nucleum esse vult, frangit nucem."

ROY'S DISCOVERIES ON THE PHYSIOLOGY AND PATHOLOGY OF THE SPLEEN.

Dr. Roy's observations on the spleen afford a distinct advance in our knowledge of the physiology of that mysterious organ, and the term "discovery" may very properly be used in connection with these researches, which teach us a novel and hitherto unsuspected function fulfilled by the spleen. It appears that normally (in cats and dogs, at least) the spleen alternately contracts and expands with great regularity, presenting systolic and diastolic phases about once a minute ; and that it thus carries on its own circulation, independently of the general blood-pressure. With regard to the features of this action, we gather from Dr. Roy's paper (*Journal of Physiology.* Vol. III., No. 3) that this subsidiary circulation is comparatively sluggish, the ingress to the organ being very narrow, as is shown by the absence of pulse-waves from the volume-tracing, and by the slowness with which the volume diminishes when blood-pressure is brought down by compression of the aorta. In extent, the splenic contractions are subject to variations, not only according as the contractions are those of a more or less bulky organ, but also of the actual force of contraction ; there does not, however, appear to be any constant relation between bulk and extent of contraction. The organ is also subject to slow spontaneous changes of volume, and similar changes can be excited by slightly altering the chemical constitution of the blood. That the rhythmic contractions are really due to the splenic muscular fibre, and are not merely of arterial mechanism, is shown by the analysis of curves in which the "Traube-Hering" rhythm has happened to supervene ; the regularly irregular trace which appears under these circumstances, evidently results from the interference of two series of waves at different rhythms ; the one series (that of the specific splenic contractions) having a slower rhythm than that of the other series (that of the arterial contractions), which gives rise to the Traube-Hering waves in the spleen, as in other parts and organs. The reaction of the splenic muscle to vaso-motor excitation, direct or indirect, is similar to that of arterial muscle. Excitation of the vaso-motor centre by dyspnœa, or by faradization, causes strong splenic contraction simultaneous with the increased blood-pressure due to arterial constriction ; excitation of the central end of the divided vagus or of the sciatic nerve causes contraction ; or, if the organ happen to be in a contracted state, increase in the extent of the natural waves ; and it is noteworthy that such centripetal excitation will cause splenic contraction after section of both splanchnics and vagi, thus indicating that there is some further efferent channel to the spleen. Peripheral excitation of the splanchnics or vagi, right or left, causes strong contraction; simple section of the splanchnics or vagi is not followed by expansion, nor is the rhythm altered, facts which go to prove that the splenic muscle is not maintained in tonic contraction, and that its rhythm, unlike the Traube-Hering rhythm, is not of central, but of local administration. With regard to the vagus, there appears to be some peculiar influence upon the heart's action proceeding along this channel from the spleen to the medulla, as shown by characteristic "vagus-heart" pulsations during the splenic systole—by section of the vagi, the character of the former is abolished, the latter remain unaltered. For details of the method, we refer our readers to Dr. Roy's paper; it will suffice to state here that the volume of the organ was measured and recorded from the displacement of fluid contained, with the organ, in a rigid case.

This important accession to our physiological notions of the spleen will doubtless be extended, in Dr. Roy's promised communication of the effect on the splenic circulation of the injection of various chemical substances into the blood. The observations throw light into an obscure corner of physiology ; and, while deprecating the building of flimsy pathology upon limited foundations, we may reasonably expect that these and further observations should help us to realize pathological aberration and therapeutic rectification of splenic function. But to judge of the influence on the economy of the physical function of the spleen, its blood-forming function, also, must be more precisely known than it is at present. We know, for instance, that we can, in man, modify, by electrical means, the bulk and muscular action of the spleen, but we are yet comparatively ignorant of alteration in the blood which we thereby increase or diminish. But whatever our wants may be in respect to information and speculations upon the relation of the spleen to the blood-corpuscles, the knowledge of its autonomous circulation is an important addition.

On the Treatment of Eczema by Bantingism. By Balmanno Squire, Senior Surgeon to the British Hospital for Diseases of the Skin.

It is familiar to every practitioner that eczema is specially common amongst infants, and particularly amongst lymphatic infants, that is to say, fat and pasty-looking infants. I do not refer only to those instances in which the very fatness of the infant is the mechanical cause of the complaint ; that is to say, where "a fold" of skin in the fat infant becomes raw and discharging (intertrigo); but I refer to the well known fact that infants of this constitution are more liable than others to eczema (of the scalp and other parts), not coming under the head of "intertrigo," and that their eczema is more profuse in its discharge whether that discharge be serous or purulent, than it is in other infants ; it is also more obstinate.

I recently recorded in the Journal some experiments I had made with iodoform as an application in such cases, and which succeeded very well as a means of reducing the eczema of such infants from the discharging to the dry condition pretty rapidly. As to that, I was supported by other writers.

But from some observations I have recently made, I have reason to think that

Bantingism as applied to such infants is as rapid in its effects, and if sustained, is of more permanent efficacy. Some years ago the late Mr. Banting was under my care for eczema, and I had an opportunity of conversing with him pretty frequently on the system of which he was the apostle. It is through this accident that the idea suggested itself to me.

I have used the word infant for the sake of convenience, but I refer rather to very young children. To Bantingize a suckling infant is, of course, not very practicable but a child of two or three years old can be dieted very readily. It does not appear necessary to the end in view that the diet should be restricted in quantity as well as quality, which of course was essential under the *regime* laid down by Mr. Banting, or rather by the late Mr. Harvey, the aurist, for him. It is simply necessary to limit the fat-producing elements of food for the amelioration of eczema in lymphatic young children. At least so I have found. By this means their excessive obesity becomes diminished, and their eczema very remarkably improved within ten days of commencing the regimen, and that without any injury whatever to their general health, so far as I can judge.

In place of pure milk, they should take milk diluted with an equal or even a double quantity of water. In place of bread and butter they should take dry toast or dry biscuits ; and with these particular articles of food they may be supplied indefinitely. All the fat is to be carefully cut away from such meat as they may partake of, and they should not be allowed pork, veal, or lamb. They may have poultry or game, or fish, except the oily kind of fishes, such as herrings, salmon, eels, etc.; and the fish they partake of should be broiled, not fried. They may eat boiled vegetable tops, but not vegetable roots, such as potato, parsnip, beet-root, turnip or carrot. Beef-tea (the melted fat being carefully skimmed off) is permissible in any quantity, and so also toast and water. Cooked fruit, not sweetened, may also be allowed.

But the principles of the Banting treatment are universally known. It only remains for me to say that cod-liver oil, the favorite remedy, *par excellence*, for the condition of which I am speaking, is quite incompatible with the treatment I am advocating. Of course, the health of the child should be watched ; and it should be weighed at the commencement of its dieting, and afterwards from week to week.

PRACTICAL NOTES ON NEURALGIA AND ITS TREATMENT. BY REGINALD G. ALEXANDER, M. A., M. D., Senior Physican to the general Infirmary, Bradford.

There exists no better established nor more important fact than that neuralgia is a disease arising when the body is in a state of general debility. This is now more generally recognized than formerly, when pain was too often regarded as the symptoms of what was termed "sthenic inflammation," to be energetically treated by low diet and depleting remedies.

As this disease is frequently mistaken for rheumatism,gout, spinal irritation, &c., and *vice versa*, it may be well to name some of the leading features of a typical case of neuralgia. 1. It occurs when general debility exists, is increased by fatigue, mental or bodily, but relieved by food and sometimes by stimulants. 2. The pain, which is sudden, darting, and excruciating exhibits remarkable intermissions, especially in the early stages of the complaint, and the constitutional disturbance is slight (temperature, pulse, &c., frequently normal). 3. It is usually unilateral. 4. As the disease advances tender spots (points douleureux) are formed in the course of the affected nerves.

That debility is a prime factor in neuralgia we have but to call to our remembrance cases which constantly appear. The overworked, anæmic, badly fed girl suffering from neuralgia of the fifth, the anxious struggling man in the early years of professional life or of business, the married woman weakened by childbearing or over-zealous in domestic cares, and the neuralgia of declining years, degeneration having set in, nutrition being defective. In our diagnosis we are assisted by the family history of the case, whether nervous disease in any of its varied forms has existed.

The treatment should be directed in every case towards improving the general health. Nutrition must be improved by very nourishing food, well masticated, and if stimulants are prescribed they should be given with food; pure air night and day; great cleanliness, and the use of sponging with sea-salt and water; Cod-liver oil and cream are of service, given after meals. Quinine in facial neuralgias, and also chloride of ammonium; arsenic in cases of angina pectoris; iron and strychnine in anæmic states. Bromide of potassium is useful in mild cases, where the pain is not severe, but a general nervous condition exists, wlth restless irritability. The subcutaneous injection of morphia, beginning with one-sixth of a grain, is the most speedy and useful remedy we possess, and is a curative agent; for it checks at once pain, and thus gives us the opportunity of carrying out all those constitutional measures for improving the general health, whilst its disturbs but little appetite and digestion, and with use a toleration is established, and appetite sometimes improved; for nothing is more apt to destroy appetite than the distress of severe pain. In chronic cases of neuralgia a blister, not necessarily carried to the point of vesication, is often of the greatest possible service, and it is a treatment peculiarly adapted to old-standing intractable cases.

Having sketched the mode of treatment it is unnecessary to give illustrations of the ordinary cases which constantly present themselves in hospitals and private practice. I therefore select from my note-book one of several successful cases where neuralgia has occurred in that period of life when a cure is rarely accomplished (some authors say *never*)—the degenerative period.

In March, 1877, I saw, in consultation with Mr. Walker, of Wakefield, a lady aged seventy-six, who in early life had suffered severely from neuralgia of the stomach, which had been much aggravated by the treatment then in vogue of insufficient nutritive food and depleting remedies. This patient was seized with violent pain, affecting the nerves of the scalp, and which became so excruciating as to deprive her of sleep for many succeeding nights. She became delirious in consequence, and we decided to inject one quarter of a grain of morphia. This gave prompt relief and procured sleep. She was ordered turtle-soup, oysters, and an exceedingly nutritious dietary. She was well supplied with food at night also, which invariably relieved the pain. A mixture, containing half-drachm doses of aromatic spirit of ammonia and fifteen minims of tincture of nux vomica, seemed greatly to improve the appetite, which became prodigious and surprising. The tendency to degenerate was kept prominently in view, pure air was freely supplied in the bedroom, and every other measure taken to improve nutrition and the general health. As a local application, the chloroform liniment with tincture of opium relieved pain, and as soon as the case became chronic, the hair was cut closely and blistering fluid applied to the tender spots, which were well developed in this case; multiple abscesses formed, and were frequently opened by Mr. Walker. This old lady, after an illness of three months' severe suffering, recovered perfectly, left Wakefield for Harrogate, and is now (1882) in fair health, having had no return whatever of her former complaint. Her body is feeble, but her mind extraordinarily clear and bright for a lady who has passed her eighty-first year.

ENGELMANN: OVARIOTOMY: DIFFICULTIES, DIAGNOSTIC AND OPERATIVE. MENSTRUATION AFTER DOUBLE OVARIOTOMY (*Am. Jour. Med. Sc.* Apr., 1882).

Attention is called to the difficulty of determining the existence of adhesions to yielding parts. In first case reported, tumor was round, movable in every direction, rolling from right to left over sacrum, independently of uterus. No history of inflammation. Yet, at operation, heavy, strong adhesions of omentum to tumor, of bladder to abdomen and omentum existed. In second case, tumor appeared completely immovable, and a portion lay between sacrum and uterus, apparently connected with the latter. On operating, only very slight adhesions were found ; the tumor was impacted between pelvis, uterus, and sacrum. Attention is also called to the difficulty of differentiating between abdominal tumors of certain kinds. In first case, a diagnosis of fibro-cyst of ovary was made, owing to fluctuation obtained. At operation, the fluctuation was seen to be due to urine in an unusually expanded bladder spread out over a colloid tumor. In second case, the diagnosis of fibro-cyst of uterus was made, the cavity being elongated and tortuous, metrorrhagia ceasing under ergot, with, at same time, a diminution in size of uterus. A fibro-cyst of right ovary was found, yet, in the history, nothing pointed to it except first appearance of tumor on right side and the cessation of menses without menstrual molimina. Elongation and expansion of the bladder is difficult to recognize. Even a careful exploration with catheter may fail to reveal it. The expansion is fan-like, the bladder is partially adherent, the resisting mass of tumor presses it firmly against anterior pelvic wall, whence catheter cannot pass to fundus. The operator should be cautious in completing abdominal incision. In E's case, the bladder was united to omentum, and hence drawn up high, was spread over tumor and compressed by it, was thin and purple, looking like inflamed omentum. In order to avoid cutting into it, always enter peritoneum at upper angle of incision, and feel for border of bladder. Stress is laid on importance of securing deep and firm union of abdomen to avoid occurrence of ventral hernia ; on the use of finest braided silk to prevent hæmorrhage ; Listerism is to be *dreaded* by the ovariotomist. The spray may be used, but at a distance from patient ; sponges, previously carbolized before use, should be cleansed in pure hot water. Silk sutures not to be carbolized. Carbolic acid specially dangerous to peritoneum. Finally, *operate early ;* never wait till life is endangered.

The first case reported is of interest from the fact that, though both ovaries were removed completely, menstruation continues with regularity, and the patient retains all womanly attributes except power of conception.

E. H. GRANDIN.

KARL SCHROEDER (Berlin) : BRIEF REPORT ON THREE HUNDRED OVARIOTOMIES (Reprint from *Berl. klin. Wochenschr.*, 1882, No. 16).

The author has performed three hundred ovariotomies within the last six years of his sojourn at Berlin. The percentage of deaths was seventeen in the first hundred ; eighteen in the second ; seven in the third. Of the latter, one died with septic peritonitic symptoms, probably because numerous ligatures had been applied to interrupt the blood supply of several irremovable uterine myomata ; two died from brown atrophy of the heart muscle ; one, in whom the rest of the cyst which could not be extirpated had been sewed into the wound, died in the sixth week from bed-sores ; the remaining three with symptoms of septic peritonitis, but in these the operation had been especially complicated.

Of the second hundred (the first has already been reported upon), five died of peritonitic or septic symptoms ; seven died, after a favorable course, of adynamia ; two from shock ; one from parotitis ; one from brown atrophy of the heart ; two from hæmorrhage.

Schroeder's manner of operating has not changed much of late. He employs as few assistants as possible. The incision is made rapidly through the external coverings and, the hæmorrhage being barely staunched, the peritoneum is divided either upon the tumor or between two pincers. Adhesions having been separated as far as feasible, the tumor is pierced with the knife and while it is collapsing it is drawn through the wound. If the pedicle is single, the spermatic vessels are tied separately, then the former is ligated in several portions with carbolized silk. If the pedicle is broad, the transparent portions, which when held to the light appear free from vessels, are not included in the ligatures. After the tumor has been cut off, the abdominal cavity is cleansed and the abdominal wound closed with deep sutures. The wound is covered with protective silk, over that an eightfold layer of gauze inclosing some waterproof material; the whole held in place with strips of adhesive plaster. Simple cases occupy only about fifteen minutes. The sutures are removed on the tenth or eleventh day; the patient is discharged in the course of the third week. He still uses the spray during laparotomies and does not believe it to be superfluous.

According to his present experience, Schroeder holds that almost every ovarian tumor can be removed; but he does not operate on any tumor which he has not previously examined under narcosis, whereby all difficulties to be encountered can generally be made out, if the uterus is drawn downward with Muzeux's forceps. The operation should be refused only—excepting advanced tuberculosis, Bright's disease, etc.—if examination positively shows the tumor to be malignant; he knows no other counterindication.

The subserous location of the tumor presents one of the greatest difficulties, but Schroeder has changed his mind regarding the sewing of the remnant located in the pelvic connective tissue into the abdominal wound, and now always performs enucleation. Another serious complication of ovariotomy is torsion of the pedicle, with its consequences; if the torsion is considerable, violent inflammatory symptoms appear; more rarely the tumor may retrogress, but usually the adhesions nourish it sufficiently, and we meet with great operative difficulties. A third circumstance which renders the prognosis unfavorable is rupture of the cyst. The frequency and the difficulties of these complications require the greatest experience on the part of the specialist, and Schroeder does not think it desirable to make the operation the common property of all operating physicians.

3. P. MUELLER (Berne): A MODIFICATION OF THE VAGINAL TOTAL EXTIRPATION OF THE UTERUS (*Centralbl. f. Gyn.*, No. 8, February 25th, 1882).—Freund's operation has been placed in the background by the vaginal method of total extirpation of the uterus, but even the latter is not free from difficulties, especially the ligation and separation of the first broad ligament is laborious and tedious. Experience shows that the second ligament is always more easily disposed of than the first, because the uterus is separated from the first broad ligament and can be drawn in front of the external genitals. The author therefore proposes to make the ligation and division of the first ligament as easy as that of the second by in some way splitting the uterus, either inverted or simply drawn downward, into two symmetrical parts in a vertical direction. Then each half with its ligament can be easily drawn down, and the first ligament as readily tied as the second. Hæmorrhage cannot be considerable, there being no larger vessels to be divided; moreover, the division can be effected so rapidly that in any event the bleeding cannot long continue; or the halves may be compressed manually or the ligaments rendered tense by traction or torsion until the ligature has been applied.

The author has not had occasion to test the value of his theory in practice, but hopes that some one of his confreres may give it a trial.

4. FRANK (Cologne): ON THE OPERATIVE TREATMENT OF INCONTINENCE OF URINE IN WOMEN (*Centralbl. f. Gyn.*, No. 9, March 4th, 1882).—The patient on whom the operation was performed had a utero-vesical fistula, and menstruated through the bladder; the urethra was lax, admitting the index finger into the collapsed bladder

with thickened walls; had had in 1877 a deep vesico-utero-vaginal fistula, for the closure of which the posterior lip had been utilized. No os or vaginal portion could be felt. All other methods of relief for the incontinence of urine — cold vaginal douches, salicylated tæmpons, Schatz's pessary, etc. —had been tried in vain.

The operation was as follows: Beginning at the external orifice, a wedge-shaped piece was excised from the posterior urethral wall (including the mucosa), terminating about one centimetre from the internal orifice. The remaining portion and the internal orifice of the urethra were narrowed by producing a sort of welt similar to that formed in man by the third lobe of the hypertrophied prostate. For this purpose, the vagina was denuded in its entire thickness in elliptical form over that region, so that the greater transverse axis of the ellipse was nearly at the point of the internal orifice of the urethra. The welt at the urethral opening was produced by folding the ellipse longitudinally and uniting it by double fine silver sutures, inserted in the median line, passing below the vesical mucous membrane, and emerging at the vaginal margin. Finally the operator closed the defect caused by the excision of the wedge in the anterior two-thirds of the urethra, which was so narrow after the operation that only a thin catheter (Charriere No. 9) could be passed. The wound was brushed five times daily with carbolized oil and the vagina filled with a strip of salicylated cotton. The patient was also placed on a ring filled with thymol gauze so as to cover the entire genitals with the latter.

The results were entirely satisfactory. When last seen the patient urinated about three times by day and once or twice during the night.—*American Journal of Obstetrics.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ON A METHOD OP OPERATING IN STRANGULATED UMBILICAL HERNIA. BY THOMAS F. CHAVASSE, M. D., F. R. C. S. EDIN., Surgeon to the Birmingham General Hospital.

In the *Edinburgh Medical Journal* for September, 1873, Mr. Annandale directs attention to a plan of relieving strangulated umbilical hernia by performing laparotomy above the protruded gut, and not cutting into the hernial sac at all. Through the opening thus made into the abdominal cavity the finger is passed into the umbilical ring. Any tight bands detected are divided, and the edges of the ring itself notched. The idea seems to have occurred to Mr. Crompton, who made an attempt to put it into practice in the year 1860. It was performed with a satisfactory result in the following case.

S. T——, aged fifty-eight, court bailiff, was admitted into the General Hospital, Birmingham, on Sept. 6th, 1881. The patient was a stout, florid man, who had had an irreducible umbilical hernia for twelve years; but as it had not caused much inconvenience no kind of support had ever been worn. Sixteen hours before admission, when coughing, the patient noticed that the size of the hernia had suddenly increased, and vomiting shortly ensued. On examination an irreducible umbilical hernia was found to exist, the protrusion from the belly being the size of a pint basin, pedunculated, and in appearance suggestive of a huge mushroom. The tumour was exceedingly tense, with no impulse on coughing, and the skin over it ecchymosed. Semi-stercoraceous vomiting was frequent, and great pain was complained of in the umbilical region. The patient having been anæsthetized gentle taxis was applied; this failing to effect reduction I made an incision two inches and a half long, in the linea alba, between the pedicle of the hernia and ensiform cartilage, and opened the abdominal cavity. The left forefinger was then inserted into the neck of the sac, on the left side of which two constricting bands were detected, and divided with a herniotome. The upper edge of the umbilical ring was at the same time notched. Taxis being now applied, part of the hernia was reduced with a gurgle. No attempt was made to force the whole contents of the sac into the abdominal cavity. The edges of the incision were then united by silver sutures. Listerian precautions were taken throughout.

There was complete cessation of pain and vomiting after the operation. Evening temperature 98.6° F.; pulse 120.

September 7th: The wound was dressed; the bowels were twice relieved. Evening temperature 100° F.: this was the highest recorded. The bowels acted again on the 8th and 9th.—10th: The wound was dressed and found to have healed by first intention; the sutures were therefore removed and strapping substituted. Listerism discontinued. 14th: Mr. Sunderland, the assistant house-surgeon reports, "Wound firmly united; patient eats, sleeps, drinks, defecates, and micturates well; says he is quite happy and thankful." He was kept under observation for ten days longer, and was sent home with a suitable support; he has remained well ever since.

Mr. Annandale suggests that two objections may be raised to this plan of operating: Firstly the danger arising from opening the peritoneal cavity; secondly, the contents of the sac may be firmly adherent or gangrenous, and thus prevent the completion of the operation.

With regard to the first objection, judging from my own experience in recent years, and the practice at the Hospital for Women in this town, opening the belly is not a very serious matter if only proper precautions are adopted; while to lay open the sac of an umbilical hernia is a step which most practical surgeons shrink from and which eminent text-book writers deprecate, Agnew going so far as to say that such a proceeding in all probability seals the doom of the patient. On this point I have examined the hospital register of operations performed for the last thirty years, and find that umbilical herniæ requiring operative interference are not very commonly met with here; for in the period mentioned nine cases (five men, four women) only occurred; three of these were in 1879, and one in each of the following years: in twenty-seven years, therefore, there were only four cases. Excluding my own, the hernial sacs were laid open in all these instances; all proved fatal with the exception of the following remarkable case.

Edward S——, aged thirty-nine, brewer, attended my out-patient room at the General Hospital for some weeks in 1879, owing to ulceration of the integument over an irreducible umbilical hernia. This protrusion was the size of a large orange, and had existed five years. Soon after healing was complete, the man, on December 4th, 1879, was admitted into the hospital, the hernia having become strangulated thirty-six hours before. Mr. Bartleet operated for the relief of this by making an incision on the left of the linea alba, opening the sac by a very limited cut, dividing the constriction upwards, and returning a portion only of the protrusion. The patient was subsequently attacked with delirium tremens and the integument over the sac sloughed off, but there was no visceral protrusion. In spite of these complications the man recovered, and was dismissed cured on January 29th, 1880.

The second objection raised by Mr. Annandale does not seem to be a very formidable one. Doubtless adhesions exist in all old irreducible umbilical herniæ, but if the constricting points can be divided from above, and some of the protruded gut returned into the abdomen, the strangulation is presumably relieved, and it would seem to be neither wise nor necessary to then attempt reduction of the whole mass.

With regard to the question of the existence of gangrene; by means of a limited incision above, the sac and its contents can readily be examined with the finger, and if necessary also with the eye, by drawing up to the abdominal opening, bit by bit, the suspected contents of the sac; should this condition be found to exist the cut can then be prolonged into the sac, and a false anus made. The ultimate result cannot possibly be rendered more hopeless by a little larger opening. This procedure was adopted in the following instance.

Jane F——, aged fifty-four, was operated on by Mr. Crompton, on September 7th, 1860, at the General Hospital for strangulated exomphalos. The hernia, in size equal to a fœtal head, had been irreducible for twenty-two years, and symptoms of strangulation were said to have existed for seven hours. The report of the operation is as follows: "A small vertical incision was made in the median line above the hernia and the constriction divided. The gut. however, was found to be gangrenous, and the sac laid open." The patient lived six days, dying on September 13th. The post-mortem showed the contents of the sac to be omentum, part of the transverse colon and five or six inches of gangrenous ileum.

The high rate of mortality following the ordinary operative interference in this class of rupture is well recognized, and so active steps are often only undertaken at the last moment, consequently a gangrenous condition of intestine is now not an uncommon complication for the operator to have to deal with.

Listerism and an earlier operation, by means of a small incision above the ring to relieve the constriction, will, I believe, tend to diminish the death-rate in cases of strangulated umbilical hernia.

NOTE ON UTERINE HÆMOSTATICS BY J. BRAXTON HICKS, M. D., F. R. S., ETC Obstetric Physician at Guy's Hospital, and Lecturer on Obstetrics, etc.

As a small contribution to the practical portion of the subject of uterine hæmostatics, I venture to make a few remarks on the mechanical kinds, which we know by the name of plugs or tents. In doing so I must be understood to refer only to those cases where the cavity of the uterus is not sufficiently large to contain blood in quantity, the loss of which from the circulation is likely to produce anything of serious detriment.

If we go back to former practice and to text-books, we find it recommended that, in case of threatened abortion with much hæmorrhage, a vaginal plug should be used.

The vaginal plugs recommended are the tampon, cotton or wool, silk or cambric handkerchief, rags, or sponges passed in till the vagina is filled up. An India-rubber ball also has been suggested, covered with felt or such like material. Now, even with the best management, there is much of distress to the patient in the use of the vaginal plug; and with regard to its hæmostatic effect very much of uncertainty; and generally partial failure; and in the hands of the unskilful and careless there is positively no restraint of bleeding worth the mention. If at any time any good results be produced, it is rather by the reflex irritation that it causes, whereby the uterus expels its contents. It is not so very rare an occurrence that one finds, on removal of the plug, the ovum on the uppermost part of it.

But besides its palpable inefficiency, a vaginal plug, being of a porous texture, absorbs a large quantity of blood and thus conceals it from our sight; it also favors decomposition, and this, as is well known, occurs within a few hours; and thus we have a new element of danger.

Again, in many cases, when called to such a case, we have no speculum at hand; and although we may extemporize one out of card-board, book-covers, or such like material, yet, before we have thoroughly and firmly filled the vagina, we must have given the patient considerable pain and distress, besides having occasion to put such pressure on the urethra as may necessitate subsequent catheterism. For these reasons, namely, the imperfection of action, pain in introduction, and danger if left in long—in other words, its general crudity, it seems to me that as a general rule the vaginal plug, should, in the cases I have supposed, be discarded.

And as a substitute I would urge the employment of the cervical plug as being more precise in action, as well as being capable, if we use a dilating kind, of expanding the canal for the purpose of exploration, or for the expulsion or removal of its contents.

If, then, in any case of uterine hæmorrhage, where we have the conditions above alluded to, we desire, besides immediately checking the bleeding, to dilate, we can use the compressed sponge-tent ; the best form of which I have found to be those made, after Sir James Simpson's plan, by Duncan, Flockhart & Co., of Edinburgh. These can be introduced by a long pair of forceps, and retained *in situ* by placing a piece of sponge, with tape attached, in the upper vagina. Of course, even these materials retain some secretions, etc., and tend to facilitate decomposition; but their removal and cleansing can be effected much more readily than the vaginal plug, because it requires but a small portion. The sea-tangle tent, by reason of its slipperiness, is unreliable as a plug in hæmorrhage. If we desire, however, only to plug the cervix, we can very easily extemporize a plug from materials to be found in every house.

For instance : take a stick (say a flower stick) about a foot long, and taper it at one end to about the size of an uterine sound, or rather larger; wind round this end, for about three inches down, strips of cambric rag, lint, or sponge to the required thickness, judging from the size of the os. Strips of sponge can be readily obtained from cup-shaped sponges of compact texture, and they can be tied on by thread, layer after layer, till the requisite conical form is obtained. The strips of the other materials can be laid on similarly. After the covered end has been well greased, it is passed into the canal, and the stick retained *in situ*, after the manner in which we tie in a catheter ; an elastic tape, if obtainable, is to be preferred.

A catheter or bougie, or the end of the long injection-tube, can be treated in the same way. If we require great precision of application, then it is best that the hand should hold the external end till the hæmorrhage has ceased. If the catheter and stilet be used, then I have found it convenient to bend the external portion backwards, between the buttocks, tying the tape round the ring of the stilet—the ends of the tape being carried, as usual, to back and front of the waistband.

These more homely adaptations I have recommended rather than the especially made kinds, because they are often wanted at times when we cannot send home for a more showy sort. In any case, a cervical plug, expanding or not, is more precise, less crude and painful in application, than the vaginal, and, in my experience, nearly always successful. In all cases of abortion, where a plug is necessary, I would lay it down as a rule, that the expanding tent should be employed. In cases of flexion with abortion (and it is this complication which so frequently increases the hæmorrhage) it will be found that the covered stick or stemmed plug, above described, is very useful ; for, if the fundus be elevated during its introduction, the uterine cavity is straightened, and evacuation of the contents thereby facilitated.

CLINICAL LECTURE ON THE ANTISEPTIC TREATMENT OF PULMONARY CONSUMPTION. Delivered at King's College Hospital. By I. BURNEY YEO, M.D., F.R-C.P., Physician to the Hospital.

GENTLEMEN :—It is but a short step from the consideration of the "contagiousness of consumption," and the infective quality of tuberculosis, concerning which I last addressed you, to the question of the antiseptic treatment of that disease.

If the expectoration, if the matters discharged from the air-passages of a phthisical patient, swarm with infective micro-organisms, as we are assured on the highest authority is the case ; if the active invading area of the diseased portion of the lung be also crowded with these same infective bacilli, what treatment can be more rational and more appropriate than that which aims at destroying the life and activity of these organisms? indeed, I might ask, what treatment can be rational or appropriate which neglects to follow this indication? The only questions that admit of argument in connection with this subject are these two: 1. Are we satisfied that the presence of these infective organisms in phthisical lungs, and their causal relationship with phthisis, have been demonstrated? And, 2. Have we the means of treating this disease antiseptically—that is to say, do we possess, in an applicable form, the agents which will destroy these micro-organisms and so arrest the progress of the disease?

With regard to the first question, I have lately had careful search made by very competent workers with the microscope, in the expectoration of patients with advanced phthisis, as well as in sections of typical tuberculous mesenteric glands; but they have not yet succeeded in finding the organisms described by Koch. But it does not follow that they were not there; the method of investigation needed for their discovery and demonstration is no doubt a difficult and delicate one, and we must not be surprised or discouraged if, notwithstanding our best efforts, we fail in our earlier attempts to demonstrate that which has cost Koch and others so much time and labor to discover. And already Koch's method of demonstrating these organisms in the sputa of phthisical patients has been improved upon by Dr. Ehrlich.

But just as a belief in the contagiousness of phthisis has long existed in some minds, so also a tendency to apply to it an antiseptic mode of treatment has long prevailed with some physicians. For my own part I may say that, during the last ten years, I have repeatedly prescribed the inhalation o- antiseptic vapors in cases of phthisis, as wel, as other treatment which I have believed to be also antiseptic; and you must often have noticed, in the wards of this hospital, that all my phthisical patients have been in the habit of wearing a form of respirator-inhaler for the purpose of inhaling antiseptic vapors, which I shall immediately describe to you.

In a paper on "Recent Researches in the Treatment of Phthisis," which I contributed to the annual meeting of the British Medical Association in 1876, I called attention to the progress that had been made in the direction of the antiseptic treatment of this malady, and I described several methods of applying this form of treatment; and, since then, several physicians, who have had large opportunities of testing its usefulness, have published some very successful results as following this plan of treatment.

Moreover, it would not be difficult to trace an antiseptic action (assuming phthisis to be dependent on the presence of an infective organism in the lungs) in some of the remedial measures of greatest repute in the treatment of this disease. The beneficial effects which are reported from the employment of the sulphurous waters of Eaux Bonnes (Dr. Leudet, *Les Eaux Bonnes dans le Traitment de la Phthisie Pulmonaire*) and of Cauterets, and of the so-called "arsenical" waters of Mont Dore, may they not be due to an antiseptic action? for the explanations of their mode of action hitherto put forth are eminently unsatisfactory. For example, when it is suggested that the sulphurous springs of Eaux Bonnes cure phthisis by "the formation or arousing of constitutional maladies of a slighter kind, which act as antagonists to the graver disease," we must feel that we are not very far off from such dogmata as the *similia similibus* of the homœopaths. But, even supposing we are on the right track in applying an antiseptic method of treatment to phthisis, and in assuming an unity and identity of origin in the great majority of cases which are recognized as pulmonary consumption, we must not ask more of this method or expect better results from it than it can possibly give.

Nothing can be more certain than that tuberculous disease, whatever may be its intimate nature, tends invariably to be complicated with the products of inflammation. Wherever there is tubercular disease present in the lung, there you will find the results of present or past inflammatory action. The course and aspects of pulmonary tuberculosis are so uniformly overclouded with the phenomena of inflammatory action, that some of this "cloud" seems to have settled down over the minds of many pathologists; and, in regarding phthisis, they seem to be unable to see through this mist of inflammation; and it must be admitted, if these micro-organisms cause destruction of lung tissue, they do so by exciting a peculiarly destructive form of inflammation; so that, in the treatment of phthisis, you must never lose sight of this inflammatory process, which always accompanies it, and plays a predominating part in its manifestations.

If in phthisis, as seems most probable, we have to do primarily with a specific virus or infective organism, and secondarily with an inflammatory process excited by it, our treatment must have a twofold object—the destruction of the virulent agent, and the reduction of the accompanying inflammation; and, in actual practice, my own experience certainly shows that the best results follow the combination in treatment of these two ends.

If we look through the whole of the literature dealing with the treatment of phthisis, it seems to me that two facts start out in remarkable prominence: one is the value of treatment which may be regarded as antiseptic—sea-voyages, mountain air, dry pure air in any locality, sulphur waters, terebinthinate vapors, iodized vapors, etc.; and the other is the value of counter-irritation, systematic and continued counter-irritation; treatment, you see, directed against a virus or an infective property—treatment directed against the results of present and past inflammatory action. But we must not expect more from antiseptic treatment than it can possibly yield. I have seen it remarked that cases of phthisis, though they might be benefited, are not cured, by antiseptic treatment. To this, I would reply, that aseptic and antiseptic treatment, if it do not cure, is, at any rate, an essential condition of cure, where cure is possible. Nature often herself erects an antiseptic barrier against the invasion of septic agents. And one of the most universally admitted remedies for staying the progress of phthisis is the removal of the patient to some place where he shall breathe an aseptic, if not an antiseptic, atmosphere. It is foolish to expect that antiseptic agents can act, so to speak, retrospectively. Water may extinguish fire, and stay its ravages, but it cannot rebuild what the fire has destroyed. So antiseptic agents may arrest the activity of septic influences, but they cannot undo the mischief that is already done.

When I read of hospital physicians vigorously plying, with so-called antiseptic sprays, patients in the very last stage of phthisis, with lung riddled with cavities, and then reporting that they have arrived at "decisive negative results," I am amazed to think that they ever imagined it possible that they could arrive at any other.

When I read that such a plan of treatment was attempted in nine patients during the last three weeks of their lives, and then read that after death "nothing was found in the pathological condition of the lungs which in any way indicated the commencement of a healing process; there was an extensive phthisical decay, with cavities filled with fluid pus; in one case of left-sided pneumothorax there was a perforated cavern." I feel constrained to say, that if ignorant charlatans wrote in this way, we should find no language too severe to condemn their imbecility. Gentlemen, this kind of thing is foolish trifling. When you are called to a case, as it is often my lot to be, and find a patient in the last stage of phthisis, with physical evidence of extensive phthisical infiltration, and breaking down of large tracts of lung-tissue and signs of excavation in various parts of both lungs, you should honestly confess that you are absolutely powerless before such a state of things, and never bring discredit on any method of treatment, by attempting with it what, from your experience and pathological knowledge, you must be aware is absolutely impossible.

Nor should we fall into the error, as some writers seem to have done, of regarding the antiseptic treatment of pulmonary phthisis as closely analogous, or a strict parallel, to the antiseptic method as adopted in surgical procedures.

The surgeon's object is to prevent the access of infective organisms from without; our object is to destroy or arrest the activity of a specific organism which is at work within—a very different end to keep in view; and I fail to see any practical or logical *a priori* argument against the conclusion, that it may be possible to impose conditions on an organism which is spreading through the pulmonary tissues which shall prove inimical to its growth and reproduction, and that is what is meant by the antiseptic treatment of phthisis.

But a complete antiseptic treatment, though it may be possible, no doubt requires minute care in carrying it out in detail.

It is not a little instructive in connection with the history of this subject to find Dr. Copland, many years ago, recording the fact that a young man, who had repeatedly come under his observation in an advanced stage of phthisis, completely recovered his health after he had been for a considerable period employed in the manufacture of creasote; and at the end of his *Historical Sketch of the Treatment of Pulmonary Consumption* he observes :—

"The inhalation of the fumes of tar or of creasote, or of the terebinthinates, very weakly diffused in the atmosphere breathed by the patient, is in some cases beneficial in impeding the advance of tubercles or the formation of cavities, and in healing the surfaces of cavities which have been formed."

Valuable testimony has been given by Dr. Lemaire and Dr. Sansom as to the efficiency of the inhalation of "carbolized air" in phthisis. Dr. Lemaire gave carbolic acid also internally in aqueous solution. He found very remarkable effects follow its use. There was diminution of cough after twenty-four hours, and in some cases almost a complete disappearance after a few days. The expectoration was diminished or almost suppressed, and if the sputa were offensive, their fœtor disappeared. In many, the physical condition of the respiratory organs was ameliorated. Some were cured, in others there was a subsidence or disappearance of *rales*, and parts became pervious to air which had previously been impervious. In other cases he had noticed increase of strength, return of appetite and sleep, increased freedom of breathing, and general exhilaration.

Dr. Jaccoud, the eminent Professor of Medicine in the Faculty of Paris, in a treatise which he published last year on the *Curability and Treatment of Pulmonary Phthisis*, thus testifies to the good effect of creasote given internally. The "pure creasote of the beech-tree" is the preparation used by preference in Paris. "This remedy", he says, "more rapidly and more surely than other diminishes the expectoration and limits the extent of the catarrhal lesions, and thus reduces considerably the area of the pulmonary changes. But that is not all; and I am induced to believe that creasote may act on the *fundamental lesions themselves, the tuberculous lesions*, and promote indurative changes, which, as you know is the method of cure." He mentions the case of a young girl twenty-two years of age, who was in the hospital three months with infiltration and softening at the left apex; and, after the creasote treatment she became greatly benefited, and was discharged fifteen pounds heavier. The signs of "peritubercular catarrh" had disappeared; the dulness had greatly diminished; and breath-sounds had to some extent reappeared. She remained in good health for two years, when she was readmitted with an attack of broncho-pneumonia from exposure to severe cold. She was very ill, but recovered to some extent; and, when convalescent, she was obliged to leave the hospital, and was lost sight of.

In another case quoted by Jaccoud, of a young Russian, thirty years of age, he observed the area of infiltration and softening at the apex of one lung, diminish one-half under the creasote treatment. "This amelioration has lasted two years, and is still maintained; and the state of the patient's general health is particularly good." He considers creasote a "precious medicine," and it now forms a "fundamental part" of his treatment. His method of giving it is to begin with a very small dose, to increase it very slowly, and to maintain its administration for a very long period. He never gives at the commencement more than three minims in the day, often less, increasing by one minim every ten days, rarely exceeding five minims, and never exceeding six. He wisely objects to its being taken pure in capsules, on account of its irritating effect, in this concentrated form, on the gastric mucous membrane. He prefers that it should be added to the cod-liver oil, if the patient takes this; if not, that it should be given in glycerine. He has found that the addition of creasote to cod-liver oil has often had the effect of enabling patients to take the latter, who were unable to do so previously; adding to the dose one drop of essence of peppermint. His formula for creasote in glycerine is as follows: Glycerine, 10 drachms; brandy or rum, 2 drachms; creasote, 3 to 6 minims; a third of this to be taken three times in the day.

Besides the internal use of creasote, Dr. Jaccoud is in the habit of recommending the inhalation of a spray of carbolic acid in cases where the disease has advanced to the formation of vomicæ, chiefly with the object of preventing the absorption of putrid secretions and debris.

Now there are many antiseptic substances, the vapor of which may be continuously, or almost continuously, diffused into the air that is breathed. Your choice may depend somewhat on the taste of the patient; or you may change the applications, from time to time, until you find out, in each case, which is most useful, and best supported by the patient.

Some simply keep the sponge (or tow) moistened with carbolic acid; others prefer creasote, and others use spirits of turpentine. I have used all these alone, as well as in combination. I have also used eucalyptol, thymol, terebene, camphor, fir-wood oil (oleum pini sylvestris), solution of tar in rectified spirit, tincture of benzoin, tincture of iodine, etc. Specimens of these substances are on the table before you, and I hand round to you inhalers charged with several of them. Of all these, I prefer creasote; but I also frequently use carbolic acid and eucalyptol, with which I sometimes mix a little camphor. Turpentine is a useful addition as an astringent, where there is profuse secretion or a tendency to hæmorrhage. Camphor has been said to be a very power, ful antiseptic, but it has the objection of diffusing itself very rapidly, and is unpleasantly pungent and penetrating. I have also found it a very convenient plan to mix these substances, such as creosote, carbolic acid- eucalyptol, or turpentine, with equal parts of spirits of chloroform. It helps to diffuse and vaporize these substances, and it is itself somewhat of an antiseptic; and it has also a soothing effect on the often irritable bronchial mucous membrane. I have often seen a patient tormented with cough at night, so much so as to be unable to get any sound sleep, obtain perfect relief from this distressing symptom by using at bedtime one of these inhalations in an instrument of this kind. The quantity required for this purpose is often quite inconsiderable; it is rarely necessary to use more than twenty minims of a mixture of equal parts of creasote and spirits of chloroform dropped on the sponge at a time, and renewed occasionally as it becomes exhausted; and it is often desirable to begin with very small quantities, until the patient gets used to the vapor. Five drops of the mixture may be dropped on the sponge at a time, and gradually increased to fifteen or twenty. One of the advantages of the little inhaler I have described to you is that, being perforated all over, the access of air is unimpeded, while the vapor diffuses itself freely into the immediately surrounding atmosphere. With more solid inhalers, patients will often say they feel "stifled," and refuse to use them.

The substances I have named are, I believe, the best for continuous, or almost continuous, inhalation; for occasional inhalation, you will find a weak iodized vapor often very useful; and even a very dilute chlorine vapor is well borne by some patients. But in these matters, as I have already said, you must consult in some measure the tastes of your patients.

Iodine vapor may be diffused through a room or small chamber by throwing fragments of iodine on a heated plate, as I now do; or it may be inhaled from the surface of hot water, by pouring a few drops of tincture of iodine on the top of hot water contained in a suitable vessel, and holding the mouth and nose over the vapor, with some light covering over the mouth and nose and vessel. The vapor of tar may be inhaled in the same manner. A sleeping apartment may be impregnated with tar vapor, by putting some tar on a heated metal plate, or stirring a vessel containing tar with a piece of heated metal of any kind, Other antiseptic substances which are not volatile or are vaporized with difficulty may be inhaled in solution in the form of spray. A Siegle's spray-producer is the instrument usually employed for this purpose.

A substance which has been given in Germany, and recommended as an antiseptic in cases of tuberculosis by Dr. Max Schuller of Griefswald and Dr. Rokitansky of Innsbruck, is the benzoate of soda. This they give in the form of spray, *i. e.*, the two to five per cent. solution in distilled water. But the great objection to this mode of treatment was the amount of fluid it was necessary to inhale (twenty ounces of a five per cent. solution daily) in order to take in the minimum dose. The patient would have, as indeed Dr. Max Schuller says, to devote his life to his cure; for you cannot inhale a spray and do anything else at the same time, whereas the inhalation of an antiseptic vapor by the method I adopt can be continued at the same time with almost any other occupation.

I have adopted this plan of treatment in a great number of cases, and in nearly all of them it has been attended with conspicuous benefit. Even in somewhat advanced cases, it allays the cough, lessens the amount of expectoration, and diminishes the fever.

There is a young girl twelve years of age in the hospital now, an orphan with no obtainable family history, who was admitted three months ago in a wretched general condition, and apparently sinking from rapid phthisis. There was dulness all over the left side, with co-extensive moist crepitant and coarse *rales*; there was diminished resonance over the upper half on the right side, with diffused bronchial *rales*. The temperature was high and fluctuating; constant cough, much dyspnœa, loss of appetite, and great emaciation. She has been kept inhaling a mixture of equal parts of eucalyptol and spirits of chloroform, and considering the miserable state in which she was on her admission, she has mended wonderfully. She coughs now very little; her appetite is good; she has gained flesh and become quite cheerful. The moist sounds have completely disappeared from the right side, where the resonance is not good; and on the left side the catarrhal sounds have, to a great extent, disappeared, and the dulness is now limited to the upper lobe. She continues, however, to manifest a subfebrile fluctuating temperature.

I could enumerate a great many cases which have come under my care during the past five or six years in which remarkable results have followed this method of treatment when it has been honestly and faithfully carried out; but I must not weary you with these details. I cannot, however, forbear to call your attention to the particulars of a case I have quite recently had under my care, and in which, I must say, I have never seen better immediate results from this or from any other kind of treatment. I first saw the case on the 6th of May. The patient was a married lady twenty-eight years of age, living in a low damp locality, who had lost two brothers from consumption, one at nineteen the other at twenty-three years of age. She had had a cough for two years, and had been losing flesh. She was confined last Christmas, since which time she had been worse. Night-sweats were constant; the cough was troublesome, and expectoration abundant. Her voice began to be hoarse a fortnight ago, and was now nearly lost. Her appetite was bad. Pulse 112; respirations 20; temperature 101 Fahr. She was considerably emaciated. There was some dulness over the left apex in front and behind, with moist clicks at the end of inspiration, and some diffused largish crepitations on coughing. On the right side, subcrepitant rales were heard over a spot just below the angle of the scapula, where they was also a patch of dulness. She was ordered to wear as constantly as possible one of my inhalation-respirators, charged with from five to twenty drops at a time of a mixture of equal parts of creasote and spirits of chloroform, so as to breathe an atmosphere only as strongly impregnated with the antiseptic as was quite comfortable to her. She was also to rub into the chest a mixture of turpentine and iodine liniment, and to take three grains of hypophosphite of lime, two grains of quinine, twenty drops of the syrup of phosphate of iron, and half a drachm of glycerine, and to continue the cod-liver oil she had been taking. She was ordered to leave the place in which she was living and go to some dry, bracing locality. It was agreed that she should go to an isolated farm-house built on a hill three hundred feet above the level of the sea, between thirty and forty miles from London, on the borders of Hampshire and Surrey, where there were pine woods and open heather country. She came to see me again after about three weeks, and she had improved immensely. The temperature had become normal, the night-sweats entirely disappeared after a week of treatment; her voice had returned after ten days; the cough and expectoration were greatly lessened. The dulness over the left apex was much less evident, but respiration there was feeble, and there was a distinct pleuritic creak in the left supraspinous fossa, a notable sign of past mischief in that region; all the moist sounds had disappeared. Her general condition had completely altered.

I have never seen a more striking improvement in so short a time, under any plan of treatment or in any locality. But this patient had been unusually obedient to the instructions that had been given her. She had devoted herself at once and unhesitatingly to all the details of the treatment. She had removed immediately to an aseptic if not an antiseptic atmosphere; she had passed a great part of her time in a hammock, suspended between fir trees, in the situation I have mentioned, and she had perseveringly worn her inhaler as I had directed.

But there is another antiseptic method of treatment which has come into general reputation within the last ten or twelve years and of the advantage of which in certain cases there can be no kind of doubt. I allude to the removal of consumptive patients to the dry, pure, cold air of elevated regions. The low temperature of these regions may have much to do with limiting the vitality and propagation of the tubercle organisms. But I have gone into this question fully elsewhere, and I need not go over that ground again here. I will, however, refer to a remarkable passage in a letter from a well-known resident in one of the chief of these resorts, Davos Platz, which seems to me to have great significance with regard to the question of the contagiousness of consumption. Speaking of the overcrowding that has taken place in that locality, he says: "The tendency at Davos has been . . . to pack the patients together in as small a space as possible, and to build new inns at the doors of the old ones. All this is done in a climate where winter renders double windows and stove-heated buildings indispensable. All this is done for a society where the dying pass their days and nights in closest contiguity with those who have some chance of living. Within the last few weeks, two cases have come under my notice; one, that of a native of Davos attached to the service of the visitors; another that of an English girl, who have both contracted lung disease in the place itself, owing, as I believe, to the conditions of life as they have recently been developed here."—Mr. J. A. Symonds, in the *Pall Mall Gazette.*

Now, if the infective character of tuberculosis were generally recognized, and the tuberculous nature of pulmonary consumption generally admitted, mistakes of this kind would hardly be committed. So, again, the antiseptic influence of sea-voyages is greatly interfered with by the unavoidable occurrence of bad weather necessitating the confinement of the invalids in close overcrowded cabins, in which the atmosphere they may have to breath, for days and days together, is anything but antiseptic.

In conclusion, let me again remind you that you will fall into a serious error, if you carry away with you the idea that the treatment of phthisis is to be altogether comprehended in the inhalation of an antiseptic vapor. It is a part, and only a part, of the rational treatment of phthisis.

I know of no disease in which so many and various indications for treatment arise during its progress. But, if pulmonary phthisis be pulmonary tuberculosis, and if tuberculosis depend on the presence of an infective organism in the tissues, a rational treatment of phthisis must include the administration of antiseptic agents, or the surrounding our patients with antiseptic conditions.—*Lancet.*

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MEDICAL SOCIETIES.

"Vitæ Post Scenia Dicunt."—LUCRETIUS.

AMERICAN MEDICAL ASSOCIATION. PRACTICE OF MEDICINE, MATERIA MEDICA AND PHYSIOLOGY.

First Day.—Chairman, DR. JOHN A. OCTERLONY, of Louisville, Ky. In the absence of DR. ROBERTS, Nashville, DR. T. N. REYNOLDS, of Detroit, was chosen Secretary.

SYSTEMATIC, ANTISEPTIC AND GERMICIDAL HOME TREATMENT OF PULMONARY CONSUMPTION.

DR. J. HILGARD TYNDALE, of New York city, forwarded a paper which was read by the secretary. After an exhaustive definition of consumption—its causes and effects, and its destructive processes, the the author gave the following factors which go to make up a clerical picture. 1. A destructive process in the lung itself. 2. General septicæmia or blood poisoning. The therapeutic plan deduced was divided into three heads (*a*) Antiseptic treatment of the local lung lesion; (*b*) Antiseptic treatment of general septicæmia; (*c*) Aiding digestion and assimilation in order to enrich the blood and through it to rebaptize the nervous centers and the muscles (primarily the heart and diaphragm) with normal blood. The author went on to describe his modes of treatment with the instruments used and the prescriptions. In conclusion four counts were given, as follows:

First. To change more or less frequently the antiseptic in the treatment of the local as well as of the general lesion, namely: (*a*) where the antiseptic first employed no longer seems as efficient as at first; (*b*) on the principle that change of remedies of the same class enhances the benefit desired from them.

Second. To alternate as to the route by which the remedy is administered both in general and local treatment, (a) whenever there is the slightest tendency to irritation of the mucous membrane where introduced; (b) it gives a rest to the route first employed and enhances the benefit derived from the remedy.

Third. To call into aid two routes at once, either in general or local antisepsis, or both.

Fourth. Employ a different antiseptic for each route.

A motion was carried to return the paper to Dr. Tyndale with permission to publish it in any medical journal, coupled with the statement that it had been read before the Section.

THERAPEUTIC ACTION OF CHLORATE OF POTASSIUM.

Dr. John V. Shoemaker, of Philadelphia, read a paper on this subject. This powerful, energetic and active drug was discovered about 1786, by Berthollet, and was used for the first time by Fourcroy in 1796, with the idea that it might transmit some of its oxygen to the body. At its introduction, this salt was principally recommended as an antidote to scurvy; Chaussier proposed it as a remedy in croup. It had completely fallen into oblivion, when Dr. Blanche, repeating the experiments made in 1847, by Hunt and West in the treatment of gangrene of the mouth and pseudo-membranous stomatitis, was led to try it in the treatment of pseudo-membranous sore throat and croup. The Doctor added that he had met with marked and decided success from its internal use in scrofulous skin diseases; likewise Dr. M. Landesberg, of Philadelphia, had reported very gratifying results from its topical aplication in epithelioma of the eyelids. In speaking of its physiological action, he remarked that the use of this salt is said to be largely due to the great amount of oxygen which it contains, and therefore it is looked upon as the most potent agent in the treatment and cure of all maladies dependent on suboxidation or defective nutrition, secretion, excretion, æration and molecular metamorphosis Dr. Shoemaker passed to the consideration of its therapeutic uses, showing that it acts in some hitherto unexplained manner in abnormal conditions of the blood, changing its character, and overcoming morbid states. In speaking of its external application, he said that the utility of this salt as a gargle in the treatment of mercurial salivation and ulcers of the mouth and throat is universally attested. In the proportion of a drachm to a glassful of water, it is of service as a gargle in the various varieties of stomatitis, often quickly relieving the dry, red, and follicular congestion of the mucous membrane, and healing the ulceration when it exists. As a local application and gargle in inflammation and ulceration of the tongue, patiently and long continued, more particularly in the latter, it seems to do more good at times in combination with astringents, than any other remedy. Used either as a gargle, or applied locally with a brush or by atomization, in simple catarrh of the anterior and posterior nares, and in simple and chronic catarrh of the larnyx, it has been constantly used in many positive and curative actions.

He has used a solution of chlorate of potassium, one or two drachms to a half pint of water, as a gargle in diphtheria and phthisis. In subacute and chronic stages of otorrhœa, and injection of chlorate of potassium in the strength of five to ten grains to the ounce of water is often effective. In ozœna, a douche of a solution of chlorote of potassium in the proportion of one drachm to a pint of water will cleanse and thoroughly disinfect the parts.

As an injection also in leucorrhœa, in the strength of one or two drachms to a quart of water, it will often prove very useful by lessening the discharge and relieving all congestion of the parts. In gonorrhœa, used as an injection, two or three times a day, in the proportion of five or ten grains to an ounce of water, it will very often produce an alterative impression upon the parts, and completely arrest the discharge. As an injection in chronic dysentery, in moderately strong solutions, say ʒ j of potassium chlorate of water, f. ʒ j, its use has been recommended.

Chlorate of potassium will bring about a beneficial effect in chancroids, applied either as a solution or dusted over the parts; also in obstinate and chronic ulcerations, gangrenous sores and ulcers. discharging fetid secretion, either alone or dissolved in water. In pustular eczema, the use of a solution containing one or two drachms to the pint of water, applied with oil muslin, will frequently lessen the discharge and heal the surface.

Chlorate of potassium as a remedy in croup and diphtheria has been used with great advantage by many eminent and experienced practitioners, from the time that it was first successfully applied by Chaussier in 1819, then by Hunt, Blanche, Isambert and Drysdale and others up to the present day. It should, in both these maladies, be given in decided doses, in from five to thirty grains, three or four times daily.

It has secured marked benefits in phthisis. In marasmus, particularly in children, the use of small doses of this salt has a very satisfactory and beneficial influence. He has administered from one to three grains, three or four times daily, to weak and puny infants, who would regain their nutrition and fatten on its use in conjunction with good food. In anæmia, it acts upon the relaxed mucous membrane of the digestive tract and so restores its functions.

In the eruptive fevers, such as scarlatina, morbili, rotheln and erysipelas, full and often repeated doses will very often fill the surface with arterial blood, and bring out an abundant crop of the eruption. In erysipelas, it may arrest the poisoned state of the blood, diminish the tendency of suppuration in the parts. It has also been said by some observers to be of service in typhus and typhoid fevers. For diseases of the skin, chlorate of potassium given in various doses according to the ability with which the patient bears the drug, is of the greatest value either in modifying or curing very many cutaneous affections. It is especially efficacious in ecthyma and in boils, carbuncles, styes, pustular acne, pustular eczema and sycosis; it lessens the tendency in many to suppuration, and should this latter condition be established before administering the salt, it will be largely instrumental in overcoming the abnormal state of the system. Its effective action in carbuncles was very recently reported DR. BOARDMAN REED, of Atlantic City, at a meeting of the Philadelphia County Medical Society, September 22, 1880. Dr. REED stated that the salt had been used upon Dr. SHOEMAKER'S recommendation who was in consultation with him. The patient, a young girl who had two carbuncles, one on the back of her neck, and the other in front of the ear; they afterwards extended until the area was about five inches in extent. The patient was very weak. She became feverish and the pulse was rapid and feeble; very little hope of her recovery was entertained until chlorate of potassium was used in decided doses. Under good food with iron, she rallied and became quite well.

He read his first observation upon the action of the drug in 1880, before the Section of the Practice of Medicine, New York city, since that time he has not only had continued good effect from this salt, but has also had from many physicians letters and short accounts of cases, commending the action of the drug and corroborating the results he reached. The Doctor further showed the good effect produced from its use in scurvy, influenza, yellow fever, rheumatism, cyanosis, hæmorrhagic diathesis, dropsy, syphilis, etc., and then gave the manner of its administration. If the salt is given in small doses, it will pass quickly and more readily into the circulation, taken before meals, diluted with water. If, on the other hand, very large doses are administered' it will probably be better borne by the stomach after meals. The dose will vary according to the affection and condition of the patient. He usually gives it in from one-half to thirty grain doses every one, two or three hours, freely diluted with water. In the above doses, it is well borne by the stomach, even in those who are very weak and enfeebled. He generally begins with a small dose and gradually increases it until the patient shows sign of its effect, or he sees improvement in the disease. Those who are large, flabby, and apparently vigorous, will improve under small doses, as large amounts will sometimes serve to still more increase the quantity of fat on the body. On the other hand, the pale, weak and enfeebled will bear much larger doses, and will often increase very rapidly in weight.

Dr. Hollister, of Illinois, did not think the physiological action of the drug when administered in large or small doses, as the case might be, had been sufficiently brought out.

Dr. Shoemaker had read only an abstract of his paper, which was very lengthy, and then re-read portions referring to the physiological action, and said that the exact action was a matter not only of dispute but of mystery.

Dr. Hollister wanted to know the *modus operandi* of the drug upon the circulation and upon the tissues affected by scrofula, etc.

Dr. Grant, of New Jersey, believed that all destruction of the tissues was by fermentation, and that chlorate of potassium acted as a powerful antiseptic in checking the fermentation.

Dr. Bennett, of Michigan, believed the drug acted as a sedative or an anti-phlogistic or eliminated noxious matter from the system. He is a strong believer in chlorate of potassium.

(A voice)—Do your patients die or get well ?

Dr. Bennett—Some of them die and some don't. How is it with yours ? (Laughter.)

Dr. Davis, of Chicago, believed the drug increased the capacity of the blood to hold in solution oxygen taken from the air cells of the lungs ; also in the diffusion of oxygen in the serum. He was sorry the author had not added to the knowledge of the agent by experiment.

Drs. Lester, of Missouri, Bell, of Kansas, and Boyd, of Indiana, participated in the discussion, which was closed by Dr. Shoemaker. The latter claimed that his paper showed the therapeutic action of the drug in many diseases which are not to be found in any works on Materia Medica. He further stated he had used the drug upon himself in a case of diphtheria, and in personal cases among his friends.

Dr. Hollister stated that twenty-five years ago the question of the uses of chlorate of potassium was warmly discussed, and an enthusiast in the matter, Dr. Fountain, of Iowa, went home and undertook to experiment upon himself. In less than a year he died from an overdose of the drug which produced acute gastritis.

Dr. Kaufman, of Nebraska, moved that Dr. Shoemaker's paper be referred to the Committee on Publication, with instructions that it be printed, and it was so ordered.

Dr. Campbell, of Georgia, made a verbal report relative to narcotic poisoning. He claimed being an anti-tobacconist—said he used it, but he knew habit was a second nature, and hoped that some suggestions might be made as to the proper dose of nicotine or some such agent to be administered in diminishing quantities, to secure a cure of the habit of using tobacco when such a cure became necessary. Why not treat the excessive user of tobacco as you do the habitnal drunkard or slave of opium.

Dr. Cook, of Tennessee, believed there was no need of the minute dose. He had found himself cured by a severe attack of illness, during which he lost the appetite for the weed.

Dr. Octerlony stated that in some classes of disease, such as cancer of the stomach, even in incipient stages, patients who had been a slave to tobacco lost all taste for it.

Second Day—June 7th.—Dr. J. C. Tucker, San Francisco, Cal., presented for Dr. Gibbon of his city, by title, a paper on *Astringent Plants of the Pacific Coast*, which was referred to the Committee on Publications.

TREATMENT OF SYPHILIS BY SUBCUTANEOUS INJECTIONS OF CORROSIVE SUBLIMATE.

Dr. John V. Shoemaker, of Philadelphia, Pa., spoke at length on this subject. He referred to progress in medicine due to the introduction of the hypodermic method of treating diseases ; from its first use by Alexander Wood, of Edinburgh, whose experiments date since 1853, up till the present time. Some three or four years ago, he began this treatment in all the syphilitic patients presenting themselves at the dispensary for skin diseases. In his practice he usually selected for his hypodermic injections a good glass syringe. Experience has proven that these were the best, the metal ones being unsatisfactory, owing to the metal becoming corroded in using the sublimate solution; the hard rubber syringes were too fragile to answer the purpose, it needing but slight manipulation to break them. To these syringes he ordered specially long needles the other needles not penetrating deeply enough, thus endangering abscess. Where a long needle is used and driven down to the cellular tissue, no injurious results will follow. He also used different needles for different patients to prevent contagion. In using the solution, he usually began on weak patients with one-eighth grain (10 minims) doses, and continued the same every day until the disease showed signs of abating or the patient experiences the constitutional effects of the drug.

In stronger subjects, he began the dose at the same quantity, and gradually increased it, minim by minim every second or third day, until the result had been obtained. After the patient had received a full mercurial impression in the manner above given, in case any of the syphiloderm should still be present, the doses were gradually diminished, just giving a sufficient quantity to keep the system under a gentle influence until all traces of the disease had disappeared. In some of the cases, especially those of an obstinate character, he was compelled to push the drug until he obtained the constitutional effects, which were marked by headache, vertigo, hyperæmia in the mouth, gums and cheeks, increased flow of saliva, difficulty of mastication, disturbances of digestion and diarrhœa before the syphiloderm would disappear. In others—who were peculiarly susceptible to mercury, all the constitutional effects followed after several injections of one-eighth grain, although he tried the peptones, chloride of ammonia, water and glycerine—together and separate at various times—without avoiding the stomatitis that Dr. Martineau has since reported did not result in his hands with all the above-named combinations. He was always compelled in these cases to begin with one or two minims of the solution and gradually increase the dose, minim by minim, until he reached the point where the patient showed slight evidence of intoxication from the drug; and then decrease it. After using all the various combinations upon the cases under his care, he came to the conclusion that plain water and the sublimate gave the best results.

The parts which he usually chose for injections were the infra-scapular and sacral regions, which are the least sensitive and are also supplied with a large quantity of subcutaneous cellular tissue in which to inject the solution. He also made injections into the gluteal regions, on either side, into the tissues on the side of the thorax and into the thighs and legs; but his conclusions are that the infra-scapular and sacral regions are decidedly the best, as in his experience the pain of the injection is not so great or persistent as in the other parts. He fills the syringe with the sublimate solution, and with the needle pointed, open, and well oiled, he picks up a fold of the integument, on one of the regions just named, with the forefinger and thumb of the left hand, and with the right previously everting the syringe and tapping it slightly, and then forcing out the air he drives the needle down deep into the cellular tissue, while he gently presses the piston to force out the contents. The needle is then slowly removed by rotating with the forefinger and thumb of the right hand, whilst the fingers of the left are used in pressing back the skin from its adherence to the needle; also in pressing out and distributing the solution in the surrounding cellular tissue, and in covering the point of the puncture of the needle, after which the syringe and needle are always well washed in plain water, oiled, and a bristle run through the needle.

The skin surrounding the puncture would become a little red or swollen in a short time, which would disappear at longer or shorter intervals—at the most, in a few days, though in some cases they would remain for a time, forming hard spots, which would eventually disappear by degrees, leaving no bad results. In the 113 cases treated, there were neither inflammation nor abscesses. Many of the patients to whom he gave the sublimate injections had had mercury previously given by the mouth without any decided results, either upon the disease, or any toxic evidence of the absorption of the mercury by the intestinal canal. Others were totally unfit to receive the drug internally, being debilitated and broken down, or having weak digestive organs and an irritable state of the intestinal tract. In such patients, it is poison in the system. It also enables the physician to give tonic remedies by the mouth, together with a good substantial and nourishing diet which can be properly digested, and the combination will act promptly and effectually upon the disease.

He believes this method to be the most speedy and certain way of eradicating syphilis, and preventing loss of flesh and vigor of the body that unquestionably follows pouring digestive mercury or iodide of potassium into the stomach. The latter organ, and the intestinal canal, becoming irritable, the more the secretions become deranged, and the patient is usually debilitated and broken down in all respects after he recovers from a successful course of syphilitic elimination, the after effect being almost as bad as the former disease ; or in case any trace of the syphiloderm remains, the system is too weak to pursue further the internal administration of the drug. It is the belief of Dr. Shoemaker, where the hypodermic use of the sublimate has failed, it has been entirely due to the carelessness of the operator.

Dr. GALLAGHER, of Pittsburg, spoke in favor of the views advanced by Dr. Shoemaker, especially the original work that he had so ably deduced.

Dr. J. H. BENNETT followed, and stated that he had made the same observations of great gastro-intestinal irritation that is often set up by giving corrosive sublimate by the mouth. He was very much interested in Dr. Shoemaker's paper, and when he returned home he would give that method a trial.

Dr. FREY, of New York, commended the results of the author, and, on motion, the paper was referred to the Committee on Publications.

Third Day—June 8th—SALICYLATE OF POTASSA IN ACUTE RHEUMATISM AND DYSPEPSIA.

Dr. M. DONELLY, of New York city, stated that two-and-a-half years of the use of salicylate of potassa has proved the usefulness of the drug for the cure of acute rheumatism. Previous to its introduction, the treatment of the disease by alkalies proved at once correct in principle, safe and certain in practice, neutralizing the acid and restoring the blood to its normal alkalinity, but slow in action. When salicylic acid was introduced, physicians hastened to prescribe it. But it was soon found that very large doses of the remedy were required to obtain the desired results, and that such large doses cause, in a majority of cases, serious heart complications. Salicylate of soda superseded this preparation and was found a safer remedy, yet not quite free from the danger of inducing pericarditis and endocarditis, for though the combination of the acid with soda promised well in theory, it has disappointed the expectations looked for, and I think because the drug, being a neutral salt, is not sufficiently alkaline to correct the acidity of the blood in acute rheumatism, and so long as the blood remains acid the danger of heart disease will exist. This theory has been proven correct by numerous eminent physicians the world over. My own experience bears out the above statement. But I was convinced that there was merit in salicylic acid, provided it could be employed with safety, and I made some experiments, hoping to find some alkali in greater proportion than soda, so as to produce a thoroughly alkaline salicylate, which I finally found in the bicarbonate of potash.

Two parts of bicarbonate of potash and one part of salicylic acid dissolved in a little water, formed a neutral solution. The potash was then increased in quantity until one part of the acid united with two parts of potash—say ten grains of acid to twenty grains of alkali in a drachm of water—formed a clear alkaline solution. This solution evaporated to dryness, left a strong alkaline salt of grayish color, sweetish taste soluble in double its weight of water, which I called salicylate of potassa. The action of this remedy is very rapid. It becomes absorbed rapidly, and its influence is felt in a few hours in mitigation of pain. In mild cases the urine and perspiration become alkaline in character in a few hours, but in severe cases several days are required to effect these secretions. This point once reached, improvement is progressive. The sediment in the urine disappears, the metastatic character of rheumatism goes with it, and the case goes on to recovery. The remedy is used until all pain and swelling are relieved, and it is then necessary to guard against relapses, which appear at this stage, owing to the lessened powers of resistance to cold of the patient, caused by thinness of the blood. To establish the rich, warm, normal condition of the blood is most readily accomplished by the use of an alkaline form of iron, and the best of all is tartrate of iron and potassa. As to the causes of rheumatism, most all physicians agree that abnormal digestive secretions take a prominent part in forming the lactic acid in the blood.

This remedy is too valuable in the treatment of flatulence, pyrosis, heartburn and loss of appetite—in fact all symptoms of dyspepsia of the acid form—to be passed without mention. Its power in controlling fermentation first led me to prescribe it in flatulence given in powder after meals. It not only relieved this symptom, but digestion improved under its use. With an experience of over two hundred cases of dyspepsia cured by salicylate of potassa, I can unhesitatingly recommend it for any of the bitter tonics. It will be found successful in nine cases out of ten, the tenth one requiring mineral acids, owing to the bilious condition of the patient.

Dr. HOLLISTER said that in Chicago there was much rheumatism. He used the salicylates with much more benefit than was obtained with other remedies. He used fifteen-grain doses of salicylic acid every three hours to reduce temperature. Its use should be guarded on account of its depressing influence on the heart's action. Salicylates were a local sedative to the nerve-extremities in the mucous membrane of the stomach. (*Adjourned*).

CHICAGO MEDICAL SOCIETY.—At the July 17 meeting of this society DR. C. T. FENN read a paper on "Primary Monomania" which consisted of the history of a single case. There was in the case an hereditary neurotic tendency. The patient was a quiet soft child addicted to day dreams. He showed talent but of a puerile character. He had several feminine ideals but no symptoms of insanity were noticed until the age of 32. The patient fell extremely in love with a lady of superior station who had never given any encouragement; who rebuffed him on all occasions He believed that the friends of the object of his affections were at the bottom of this. That they slandered and persecuted him,and his conduct changed; from being temperate he became addicted to ardent spirits and had frequent attacks of delirium tremens. He soon adopted a wandering life and dressed in the incongruous dress so frequent with the chronic insane. Hallucinations of sight and hearing soon became manifest. He lived till the age of 82 without ever having been confined in an asylum for the insane. The patient died from senile exhaustion. There were found meningo-encephalitic changes. The brain was asymmetrical. The skull was markedly asymmetrical and the occipital fossa shallow. There was asymmetry of the convolutions. There were three on the right island of Reil and four on the left.

Dr. Hollister reported a case where the autopsy revealed similar cranial and cerebral asymmetries. The patient was very brutal and obstinate. He had observed two similar cases, one lasting fifty-one and one forty-nine years. Mental strain, abuse of alcohol and the various condiments were very potent causes of insanity.

Dr. Paoli was of opinion that only acute types of insanity were curable. The more chronic types and those resulting from epilepsy and paralysis were incurable.

Dr. W. H. Cortis called attention to the bony deposits often found in the meninges of epileptics.

Dr. Fenn said that there was an abnormal and a normal asymmetry. He was of opinion that men became insane from imitation.

Dr. D. F. Scheffers alluded to the frequency of tetanus since the introduction of the toy pistol. Fourth of July, two years ago, he had treated 37 cases of gun shot wounds, but in none of these had tetanus resulted. He had treated but five cases this year, of whom two developed well marked tetanic symptoms. He asked if these and the numerous cases, sixty during a very brief period, reported were not due to some poisonous element.

Dr. Hollister said that he was of this opinion, and that in certain cases of tetanus there might occur changes in the Pacinian corpuscles rather than in the central nervous system.

Dr. Kiernan said that the pathology of tetanus was by no means settled; the results detailed were in many cases rather the secondary changes produced by the disease, than the lesions leading to the tetanic symptoms. That there were bio-chemical changes in the Pacinian corpuscles was not improbable. It must be obvious, however, that not every nervous system could develop tetanus. There must be instability. There were certain nervous systems which were so badly arranged as to take on tetanic phenomena from moral causes. On the other hand fragments of glass had remained for years in the nerves of some persons without causing any tetanic symptoms. The instability of the nervous system was, he thought, an essential factor. The contagious element was a doubtful matter. As already stated moral causes might play a part in the production of tetanus. Fear was excited by a few cases of tetanus reported, and this was the exciting cause of most of the cases of toy-pistol tetanus; an origin of the fear being found in the wound. He thought that were the subject less discussed by the daily papers, cases of tetanus would decrease. This to his mind explained the frequency of toy-pistol tetanus.

Dr. Valin believed that tetanus might be contagious, and cited cases where tetanus in a horse had lead to tetanus of the dogs of his stable.

Dr. Kiernan said that the evidences of contagion were faulty. The cases were too few to show it, and alluded to the influence of imitation on animals.

At the August meeting of the Chicago Medical Society, Dr. C. W. Earle read a paper on "Cirrhosis of the Pancreas." He first narrated two cases which came under his own observation. The first patient was a gentleman, aged sixty, who had an excellent ancestral history and had always been of regular habits. He had never had syphilis. Till within a few months prior to coming under Dr. Earle's observation he had never been ill. He had found himself becoming, without apparent reason, emaciated and had called on a physician, who referred his symptoms to malaria. He was disinclined to eat meat, preferring milk, mush, etc. When he came under Dr. Earle's observation he was markedly emaciated, was very weak, and presented a peculiar anæmic appearance. He complained of a roaring in his head and ears. His skin had a dirty yellow appearance; his lips were colorless. He complained of dyspnœa and lassitude and an anæmic murmur with the first sound of the heart. There was some pain felt on pressure over the epigastrium. He complained of thirst and nausea. His legs were œdematous, but albumen was not to be detected in his urine. His stools were black, but no fat was ascertained to have been passed from his bowels during life. The patient died a month after coming under Dr. Earle's care. There was found on autopsy an indurated pancreas. Under the microscope, the connective tissue was markedly increased and there was marked obliteration of certain glandular vesicles. There was slight fatty degeneration of the kidney.

The second case was that of a man fifty-seven years old, who, up to two years prior to his death, had been remarkable for physical vigor. He then began to emaciate. January 1, 1882, he was seen by Dr. Earle, who learned that twelve years previous he had been troubled by an extensive eczema and had hæmorrhoids. He had for some years been troubled by indigestion. His skin presented a sallow, anæmic appearance ; had a great distaste for meat. He had when taking food a feeling of languor and nausea. He was treated with pancreatine, pepsin and the mineral acids, and improved for a while. He subsequently developed pain at the ensiform cartilage and vomited from time to time fat. He had at one time an attack of hæmatemesis lasting eight hours. He died June 30, 1882.

On autopsy the pancreas alone was found to be abnormal. It was enlarged and markedly indurated in patches. The microscopical examination revealed an increased growth of connective tissue. Bartholow has made the remark that little is known of diseases of the pancreas. Aitken ignores the subject entirely. Watson only mentions it briefly. Rokitanksy found it in a new born child; Cruveilhier in a fœtus. Scholer describes induration of the pancreas in a female child nineteen days old. Classen relates five cases of pancreatic disease in new-born children. Ziemssen reports one case of luetic change in a still-born seven months fœtus. Da Costa has collected forty-four cases of pancreatic disease. The first symptom of pancreatic disease may be emaciation but this is of no great negative or positive value. There may be a flow of saliva like fluid but this is found in other conditions. The presence of fatty matter in the stools or vomit is of value, but is not pathognomonic. Pain at the epigastrium is present in so many conditions as to have but little value as a symptom. Fatty urine has also been cited as a symptom, and cases of this kind have been reported by Dr. Hollister and the general symptoms, of his cases resembled those already cited. Diabetes mellitus sometimes is complicated by pancreatic disease. Dr. Earle regards lues and alcohol as playing an important part in the ætiology of pancreatic disease.

Dr. Fenn asked if the pain in the rectum had exacerbations, and was answered that it had, whereupon be reported two cases with symptoms similar to those of Dr. Earle.

Dr. W. E. Clarke asked if the distaste for meat was present for a long time before death ?

Dr. Earle replied that the symptom was of little value and had not been present during a long period.

Dr. W. E. Clarke had had under observation three similar cases to those of Dr. Earle. In all three eczema had been a marked feature.

Dr. Poole narrated a case of pancreatic disease which had come under his observation in 1838 in Norwny. The patient, a man weighing 250 pounds was reduced to a mere shadow.

Dr. R. N. Isham said he had never seen a case of scirrhus of the pancreas in which the mesenteric glands were not involved. The emaciation might be due to interference with the thoracic duct, the eczema to interference with the portal circulation.

Dr. L. C. Waters reported a complicated case of scarlatina. The patient, a child eight months old, had about recovered from an attack of scarlatina when it developed diphtheria and diphtheritic peritonitis, from which it died in nine days after the first appearance of the diphtheritic symptoms.

Dr. R. N. Isham then reported a case of ruptured kidney. A man aged forty, while at work on a locomotive, slipped and fell from the gangway a distance of four feet, striking his left side across a wooden horse.

Dr. Isham saw him an hour afterward, and found him in a condition resembling collapse from hæmorrhage; countenance pallid, expression anxious, considerable pain referred to the region of the diaphragm. He was covered with a cold perspiration, and his pulse barely perceptible at the wrist. No external wound or injury to be detected. Percussion gave more than normal area of dulness over the left hypochondrium. The urine drawn off by catheter was mingled with blood. The patient rallied rapidly, and the hæmaturia disappeared. The case progressed very favorably for five days, when on the morning of the ninth day after the injury, the patient complained of intense pain, paroxysmal in character, and referred to the lower abdomen, and there were marked symptoms of collapse. The case was treated with opium and chloroform. The resulting history of the case was that of a case of peritonitis apparently tending to recovery but suddenly ending in death. Soon after the revival from collapse, Dr. Isham had diagnosed the case as rupture of the kidney, and had tentatively aspirated and satisfied himself of the correctness of his diagnosis. He proposed nephrectomy, but the operation was declined. On autopsy there was found in the left lumbar region a collection of blood partially organized, and containing the remains of the left kidney. This kidney had been ruptured in three places, and two-thirds were blended with the partially-organized blood. The points of interest are the slight cause of the accident; the apparent recovery and the possible good effects had nephrectomy been attempted. After the usual reports of membership, election by the secretary, Dr. L. H. Montgomery, the society adjourned.

State Board of Health of West Virginia and the Requirements for the Practice of Medicine.—At a meeting of the State Board of Health of West Virginia, held in the city of Parkersburg on Wednesday, July 26, 1882, there were present Geo. H. Moffett, M. D., President of the Board; Geo. H. Carpenter M. D.; C. T. Richardson, M. D.; Gabriel McDonald M. D.; Lawrence Carr, M. D.; Wm. M. Late M. D., and James E. Reeves, M. D., Secretary, the Hon. A. R. Barbee, M. D., being the only absent member.

The business of general interest to the medical profession transacted at this meeting, was the adoption, by a unanimous vote, of the following preamble and resolutions defining the words "reputable medical college," as they occur in the law creating the Board:

1. *Whereas*, It is one of the special duties of the State Board of Health of West Virginia to protect the people against incompetent medical practitioners; and,

Whereas, The said Board is charged with authority of law to reject applicants for medical certificates who are graduates of disreputable medical colleges, unless they, the said applicants, shall appear before the said Board, and pass a satisfactory examination in all the branches of the profession; and,

Whereas, The test or proof of proper reputation of a medical college is the occupancy of all needful grounds and buildings set apart for lecture and laboratory work; the possession of such medicinal and scientific apparatus or appliances as are necessary to illustrate and supplement medical lectures; a de facto corps of capable professors, whose curriculum embraces not only both lectures and examinations in the eight ordinary branches of medical education—namely, anatomy, chemistry. physiology, hygiene, surgery, obstetrics, practice of medicine, materia medica, and therapeutics—but also the additional and important departments of hospital and clinical instruction; a preliminary examination as a condition of matriculation; the requirement of actual (not merely nominal) attendance upon at least eight-tenths of the lectures of two full winter courses; dissection, practiced during one full winter-course and finally, strict adherence to the measure of requirements for graduation established and published by its officers and and faculty; therefore,

Resolved, That the State Board of Health of West Virginia will not hesitate to refuse recognition of all diplomas granted by disreputable medical colleges.

Resolved, That nothing less than the definition or measure of requirements expressed in the foregoing preamble, or a very close approximation thereto, will be accepted by this Board as proof of the "good reputation" of a medical college.

2. *Whereas*, This Board has before it a communication published in the Philadelphea MEDICAL NEWS, July 22, 1882, over the signature of "D. N. Kinsman, M. D., Dean of Columbus Medical College," which gives the standard of requirements upon which the diploma of that college is issued; and having other evidences of indisputable character that the said Columbus Medical College has grossly violated its published requirements for graduation; therefore,

Resolved, That this Board can no longer recognize Columbus Medical College as worthy and "reputable" within the meaning of the law from which this Board has received authority to pronounce upon such cases; and all persons applying for registration on diploma issued by said Columbus Medical College will be rejected; unless they, the said applicants, submit to an examination by this Board, and are found duly qualified to practice medicine, surgery and obstetrics in West Virginia.

Resolved, That this action is based wholly upon recent proceedings on the part of the Faculty of Columbus Medical College, and there is nothing in it which is intended to, or should in any manner, reflect upon the professional standing of graduates of that school prior to 1882.

CORRESPONDENCE.

MONSTROSITY.

DR. E. S. GAILLARD, *Gaillard's Journal*, N. Y.

DEAR SIR : I was called June 14th to see Mrs. B., who stated she was in the third month of pregnancy. From the development of the child and the fact that the lady had been married but three months, we would be justified in saying the fifth month. She was in labor pains, and stated the waters had ruptured three days previously. Os dilated to about the size of a silver quarter, soft and dilatable. In an hour considerably dilated ; pains regular, a flow of blood with each pain, nausea with a tendency to syncope. In an hour more, detected what I thought to be a presenting placenta. After a few more pains the vagina was filled with the presenting mass, but with it I found loose or floating gut ; I waited two hours, then with a view to discover, if possible, the position of the child, I gently pushed the mass back, when with the next pain the fœtus was expelled. Upon examination I found what I thought was a presenting placenta, to be the liver, spleen and intestines of the child. All external, and seemed to protrude through a cicatricial opening just above the umbilicus. There was complete absence of the abdominal muscles, there being only a loose, flabby skin ; upper extremities well developed, nothing abnormal ; lower extremities, left leg about three inches shorter than right, and both distorted out of shape. The child weighed about five and one-half pounds.

Mr. Editor, I find no case on record where the liver, spleen and intestines were all external, and I assure you it is very embarrassing to a young physician to have them as the presenting part. Believing it to be one of the most uncommon of fœtal malformations, I take the liberty of reporting it to your journal.

Very respectfully,
B. B. PIERSON, M. D.
HONEY GROVE, Fanning Co., Tex.

San Diego, Cal., May 18, 1882.

E. S. Gaillard, A. M., M. D.—Dear Doctor: A *Dr.* H. G. Root, 183 Pearl Street, N. Y., claiming to be a *graduate* of the *N. Y. Medical College*, is advertising an "Epilepzine" for $4 per bottle, etc., etc. He claims to be a *regular*, in his circular, which, of course, we know to be "in oculo." However, his remedy seems to relieve many of the cases, and I should much like to know through your Medical Weekly what are its active ingredients. I should not be surprised to find some of our old stand-bys in large doses. In any event I think you would be doing a power of good by showing him and *it* up.

Very truly yours,
C. M., M. D.

Stanton, Tenn., July 29th, 1882.

Doctor Gaillard—Dear Sir: In the treatment of fourteen cases of typho-malarial fever, and one of typhoid fever during August and September of 1881, I used as antipyretics Sulph. quinine, salicylate of soda, and cold water.

The soda only in the case of typhoid, and in which the highest temperature obtained was 106.° Under its use the temperature and pulse ran down to rise again on its discontinuance; repeated with like effect, but without corresponding improvement in other symptoms.

Patient died. The only one of the fifteen, Sulph. quinine did not give good results, given in small, medium, and large doses, but little or no decline in temperature, causing marked unpleasant effects on the nervous system, especially the brain.

Cold water is the only antipyretic that has given me satisfactory results, and has but seldom if ever failed to reduce the temperature, with an improved condition of the patient in other respects.

A sensible nurse taught how to use the thermometer, with instruction to not let the temperature rise above 103°, or to depress it below 100°, not to be inattentive and let it rise to 105° or 106°, and then suddenly turn on water and run it down, &c., but to keep it below 103°, discontinue it at 102°, for I have noted frequently, when the temperature was reduced below 102° by cold water, that chilliness and other unpleasant symptoms were obtained. Indeed I have sometimes found tepid water more pleasant and equally as efficient in those very nervous cases, as cold water in the ordinary cases.

And that's what I know about antipyretics.

Respectfully,
S. W. Caldwell, M. D.

See the American Med. Weekly, July 22, pp. 699 and 700.

Flatonia, Texas, June 15, 1882.

Dear Doctor:—For the past three years I have been in the habit of giving Tr. Iodine in ordinary cases of *chills* and fever, beginning just after the fever goes off and giving ten drops of the tincture in plenty of water every six hours until the expected time of the next paroxysm, or longer, if the attack is a chronic one. Success attends in about three-fourths of the cases. The expense is almost nothing.

Yours truly,
H. A. Tutwiler, M. D.

——o——

REVIEWS.

"Judex damnatur cum nocens absolvitur.

Clinical Lectures on Diseases of the Urinary Organs. By Sir Henry Thompson. Sixth Edition. Presley, Blakiston & Son, Philadelphia: 1882.

This work has reached its sixth edition in London, and fully as many editions have appeared in this country. Apart from the sound judgment and operative skill of the author, this work, from its didactic and literary merits, has always been a great favorite with the entire Profession in this country as in Europe.

The chapter on Lithotrity at a single sitting will by read with especial pleasure, as the author not only declares himself a convert to the teachings of Bigelow but adopts the methods of Bigelow, in almost all such cases. In the preface Sir Henry states that he regards this "modern operation" as "superseding the old operation, and to a great extent the operation of lithotomy;" and that this is no mere general statement of opinion only, is fully shown by the results of the operation in Sir Henry's own hands during the last three and a-half years, during which he has employed this method almost entirely; for the last two years he has employed it without any exception. During that period he has operated on 112 consecutive cases of elderly men—that is, on 112 separate individuals. The mean age of these patients has been over sixty-two and a half years, and no case of mere phosphatic concretion is included in the list. The calculi have been thus composed: of uric acid 64, of oxalates 4, of phosphates 39, mixed 14. The number of deaths has been three only. Sir Henry's average mortality with the old operation was seven and a half per cent.; and once he had so few as 6 deaths in 112 consecutive cases. We thus see that in the hands of the accomplished operator and chief exponent of the old operation, the adoption of Dr. Bigelow's suggestion has reduced the mortality by more than half.

The work has been carefully revised and amended. Like the English edition, this last American edition is published in paper covers, reducing the cost of the work very materially.

It would be well for all American publishers to issue medical works hereafter in paper covers. Each purchaser could then select some style of library binding most agreeable to him, and have all of his books present a uniform binding and appearance.

SARCOMA AND CARCINOMA. THEIR PATHOLOGY, DIAGNOSIS AND TREATMERT. By H. T. BUTLIN, F. R. C. S. Assistant Surgeon and Demonstrator of Surgery and Diseases of the Throat St. Bartholomew's Hospital, London. J. and H. Churchill, 1882.

This book contains a condensation of lectures delivered at the Royal College of Surgeons during 1880 and 1881. The author is evidently a painstaking observer who has not only the ability to collect facts but also knows how to view them. There is not visible that undue tendency to exalt mere facts which is the bane of many modern works. The author denies the essential malignancy of the carcinomatous tumors of the testicle. He believes that when cartilage is found in a sarcomatous testicle it is evidence that the sarcoma has become chrondrified and not that it has developed from an enchondroma. He has seen but one case of sarcoma of the tongue. The book is of decided interest, is preëminently practical and has been well issued.

EXPERIMENTAL METHOD IN MEDICAL SCIENCE. Second course of the Cartwright Lectures of the Alumni Association, College of Physicians and Surgeons, New York, delivered during January and February, 1882. By John C. Dalton, M.D. 12mo. 1882. G. P. Putnam's Sons. Cloth. Price $1.25.

As is well known, this is the series of lectures delivered by their author in the winter 1881-'82. They manifest that sound eclecticism, good judgment, clearness and correction of diction characteristic of the writer, and he has perhaps done as well as usual in the presentation of his subjects. There is however nothing original or novel in the book and it cannot be said to add anything to the reputation of its author. It is fairly printed and is worthy of a place in the library.

ANNUAL REPORT OF THE BOARD OF REGENTS OF THE SMITHSONIAN INSTITUTION, 1880. Washington, Government Printing Office. 8vo. pp. 772.

One of the fullest and most valuable of the reports of this institution, now the centre of much of the best scientific work of the country. The funds of the institution amount to $651,500. Professor Baird believes that the efficiency of the institution would be doubled were its endowment raised to the limit fixed by Congress, $1,000,000.

It is doubtful if $348,500 could be placed where it could do more for the increase and diffusion of knowledge among men. A valuable feature of this year's report is a 200 page summary of recent scientific progress. Among the other useful papers is a 100 page synopsis of the writings of Sir William Herschel.

GEOLOGICAL SKETCHES AT HOME AND ABROAD. By Archibald Geikie, Director General of the Geological Surveys of the United Kingdom. New York: Macmillan & Co.

Dr. Geikie is a charming writer as well as a successful student of geology in its broader aspects. The papers here collected cover a wide range of subjects, from the author's first geological excursion as a boy to his recent studies of American geology in Utah, Wyoming, and Colorado. The volcanoes of central France, the old glaciers of Norway and Scotland, geographical evolution, and the geological influences which have affected the course of British history, are among the other subjects treated upon

THE COUES CHECK LIST OF NORTH AMERICAN BIRDS. Second edition. With a Dictionary of the Etymology, Orthography, and Orthoepy of the Scientific Names, etc. Boston: Estes & Lauriat.

This is quite a different book from the original check list, the high value of which as a catalogue of names is known to all students of American ornithology. The present volume is an improvement and extension of that, with an ornithological dictionary added. As an indication of progress in this department of science, it may not be noted that the number of species is now 888 against 778 as given in 1874, while ten of the latter list have been ruled out—six as synonyms and four as extra limital. Thus 120 new species have been discovered in eight years.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

"DRUNK OR DYING."—From the report of a recent inquest on a case in which the police had failed to discriminate between apoplexy and drunkenness, it appears that a medical witness remarked, "It was a mistake police officers often made; but the local police had been attending the Ambulance lectures, and, he thought, would have been able to distinguish the two." This would seem to imply that at least one member of the profession expects more than it is reasonable to expect from the modicum of information it is possible to acquire in the course of a system of instruction which is rather well-intended than well-advised. If the teachings given by the Ambulance authorities were more modest, it would be incomparably more useful. It is not mere surplusage to talk to policemen about the special symptoms of drunkenness as distinguished from apoplexy. Even trained medical men have often great difficulty in recognizing the difference between the two states, and, as we know, mistakes sometimes occur even in hospitals. The police should be instructed to treat all insensible or drowsy persons as though they were suffering from illness, and to send at once for medical aid. If the case prove to be one of simple drunkenness, the fee for attendance could be added to the fine imposed; if not, it would be only too gladly paid by the friends of the patient. It is inevitable that mistakes should occur if the police are permitted to attempt a diagnosis. We should be glad to hear that the whole system of instruction by "lectures" and "examinations" given under the auspices of the Ambulance Association had been revised, and that instead of the bewildering, because quasi-technical, knowledge it is now desired to inculcate a few simple principles were laid down, with sole reference to the prevention of accidents, until proper aid can be obtained. It is in no spirit of jealousy that we make these remarks. The Ambulance Association might do excellent work, but it has overstepped its province and is ill-advised. This is manifest from the questions set in the "examination papers."

IODOFORM IN DIABETES.—The last drug introduced into the treatment of diabetes mellitus is iodoform, which Professor Moleschott, in a recent communication to the Academy of Medicine at Rome, states he has found to be very beneficial in five cases of that disease. The quantity of sugar excreted rapidly diminished in all the cases so treated. Small doses are sometimes productive of good results, but as much as forty and fifty centigrammes may be administered daily wlth impunity. The Professor employs cumarin—the odoriferous principle of the Tonquin bean—to overcome the unpleasant smell of iodoform. He prescribes—iodoform, 1.0 ; extract of lettuce, 1.0 ; cumarin, 0.1 : to be made into twenty pills with powdered gum arabic, and to proceed from one pill twice to two pills four times in the twenty-four hours.

VOMITING OF URINE. — Generali and Tovini report in the *Cronica Medico Quirurugica de la Ebana*, a case of a lady who had inflammation of the lung, following which she had an attack of peritonitis with serious effusion into the peritoneal cavity. The patient had a sudden decrease of urine, and at the same time vomited a fluid looking like urine ; a chemical analysis was instituted and the fluid was found to contain urea, phosphates, chlorides, alkaline sulphates, magnesia phosphates, carbonic acid, and pigment. Microscopically, epithelial cells from the stomach and œsophagus, mucus, and crystals of uric acid. As long as the urine was discharged in this way, not a drop could be obtained from the bladder. After a month the patient recovered.—*Jour. de Med. de Paris.*

SUBCUTANEOUS INJECTION OF ETHER IN PNEUMONIA.—From experience in 14 cases Dr. Barth (*Lyon Med.*) strongly advocates the subcutaneous injection of about one gramme of ether in adynamic pneumonia. Almost instantly respiration becomes easier, pulse gains in strength and fulness, while the color of the face becomes more natural. In two or three minutes the ethereal odor is noticed in the breath, showing that the volatile liquid has reached the air passages. It is necessary to use the injection at least twice a day, and in severe cases four doses may be thus administered in 24 hours without inconvenience. Dr. Barth has not exceeded this dose, nor has he experienced any trouble from the punctures in the way of serious irritation.—*Glasgow Med. Jour.*

THE HYGIENIC VALUE OF THE ELECTRIC LIGHT.—The French scientific journal *La Nature* summarizes a communication from Dr. Javal, who believes that the electric light is absolutely without danger to the sight, in consequence of the amount of division which can now be obtained in it *L' Union Medicale* also reminds its readers that similar researches of great interest from a scholastic point of view were published in that journal in May and July, 1881 ; including the researches of Dr. Cohn of Breslau, who found that the electric light increases sixfold, as compared with daylight, the perception of yellow, and doubles the perception of green and blue. The observations of Dr. Blasius and Dr. Hoppe, in a discussion which took place at a meeting of the Brunswick Society of Natural Sciences, are also noteworthy. These scientists have shown that illumination by the electric light deserved preference over all other methods in use, for the following reasons : 1. It does not pollute the air with deleterious gases or other unhealthy products. 2. It induces a greater visual unity than with daylight or gaslight. The conclusion adopted by the meeting was, that " the hygienic qualities of the electric light have not hitherto been appraised at their real value." —*British Medical Journal.*

THE ABORTIVE TREATMENT OF BUBOES. —Dr. Morse R. Taylor speaks in terms of high praise of the injection of a watery solution of carbolic acid into inflamed glands. The strength of the solution he has used has varied from four to sixteen grains per ounce, and the quantity injected from ten to forty minims. He states that if injected before suppuration has occurred it will prevent that result, and if injected after aspiration of a suppurating gland it will prevent all resecretion of pus, while in all cases alike it relieves the pain in a few moments permanently, and is followed by the rapid resolution of the inflammation Dr. Taylor recommends that the skin be refrigerated with the ether spray, and care taken to introduce the point of the syringe into the centre of the inflamed gland.

Listerism and Anti-Listerism.—This affords ample material for serious reflection. If in Switzerland antiseptics have been followed by a remarkable diminution in the death-rate, if Dr. Keith had one run of eighty cases treated antiseptically without a death, is an occasional death from carbolic acid poisoning (which may, perhaps, be avoided by not using solutions unnecessarily strong, or by the use of some other agent) to justify a surgeon in operating without more than ordinary protection against infection? What does recent experience in London say on this point? Has the mortality after ovariotomy in our large hospitals been smaller of late years than it was before? If so, can the diminution be explained by the increasing experience of the operators? On this point the registrars of our general hospitals may give some important evidence; and in the special hospital which may still be regarded as the headquarters of ovariotomy—the Samaritan—the experience of the year 1881 snould afford an array of important facts. In that hospital, the patients are very much of the same class of life, and are treated under very similar conditions by three operators of large special experience. Two of these surgeons use the spray of carbolic acid in every operation of a strength of 1 in 40, and follow out in the strictest manner all the precautions of the Listerian method. The third, after gradually diminishing the strength of the pray till water alone was used, gave it up altogether. Here then, were the "comparative observations made under similar conditions with and without spray," proposed by Mr. Spencer Wells, carried out under singularly favorable conditions. And what has been the result? We have been informed that the committee has expressed a strong opinion against the performance of ovariotomy for the future without full antiseptic precautions; and the experience of 1881 would seem to justify this recommendation, however objectionable it may be to admit of any interference by a committee of laymen in practical details. Still, if in the same institution, at the same time, by operators of equal experience, the same operation with antiseptics is followed by a mortality of about 7 per cent., and without antiseptics by one of about 30 per cent., the fact deserves very serious consideration, and is rendered additionally imporportant by the apparently contradictory results of experience in Switzerland and in Edinburgh which have now led us to direct the attention of our readers to the matter.

Ligature of the Innominate Artery.—Fuller details of Mr. Thomson's case are briefly reported. The patient, forty-five years of age, was suffering from a large aneurism, involving the second and third parts of the subclavian artery, and three and a half inches in diameter. The operation was performed at the Richmond Surgical Hospital, England. An ox-aorta ligature, one-sixth of an inch in diameter, was employed, and was passed round the innominate artery by means of the instrument specially devised by Mr. Barwell for the purpose. On the third day, the tumor felt firm, and was already diminished in size; the wound remained aseptic, only a small quantity of serum oozing from the drainage-tube. On the thirteenth day, the pain, from which the patient had suffered much before operation, had completely disappeared; and sensation was returning in the right arm, which had been paralyzed for several months. The tumor was steadily contracting, and the wound had entirely healed, except at one point, kept open by a few threads of catgut.

THE SMOKE ABATEMENT EXHIBITION.—The awards of the jurors of the Smoke Abatement Exhibition are now complete, notices have been forwarded to the exhibitors, and the lists have been issued. The lists are too long for production here, but will, we believe, be published, with the full reports in a separate publication shortly. Meantime, a descriptive account of those exhibits to which the jurors have awarded the various medals is published in the *Sanitary Record* of the current month, with illustrations. The jurors in the various deparments have been men of the highest eminence. In the section of stoves, grates, and kitcheners, the principal jurors were Professor Frankland, F. R. S., Colonel Festing, C. B., and Mr. Cutler, F. R. I., B. A. It may be noted that the chief prizes, both in kitcheners and in grates, have been awarded to Messrs. Brown and Green for their very simple and very effective kitcheners and grates, in which great economy is effected, and the emission of smoke almost entirely prevented, by the adoption of a simple apparatus for underfeeding, which is effected without any complicated contrivance or unsightly addition to the grate or kitchener. Excellent results have also been obtained in similar directions by other manufacturers of kitcheners and grates, especially by Constantine ; the Eagle Range Company ; the Radiator, Range Company ; Brown and Green, etc. in kitcheners ; and by Clark, Bunnett, and Co., in the Ingram Kaio Kapnos grate ; Shorland in the Manchester ventilating grate ; and in the Feetham, Stanley, and other grates.

CONDURANGO AND CARCINOMA—*A. Hoffmann. Diss. Basel.* 1881. *Centralblatt, f Med. Wissensch. No.* 15. 1882. H. gives a tabulated list of all cases of carcinoma treated with condurango in the hospital at Basel, since 1871. For three years past all cases of cancer of the stomach and bowels have been treated exclusively with condurango. H.'s list embraces in all, 132 cases. Treated with condurango, 20; of these 2 remain unimproved; improved 8; died, 10. Treated without condurango, 108; unimproved, 28; improved, 10; died 70.

OPIATES AND PERISTALSIS.—Professor Nothnagel of Vienna recently communicated to a German society the results of experiments on the action of opium and morphia on the intestine. The constipating power of these drugs appear due to their being irritants of the splanchnic, the inhibitory nerve of the intestine. That nerve is specifically influenced by morphia, just as the vagus, the inhibitory nerve of the heart, is acted upon by digitalis ; in fact, in both cases, small doses excite, large doses paralyze. It was observed, in a discussion on this question, that the peristaltic action of the intestines is not necessarily the same in man as in animals. Antiperistalsis does not appear to occur in the latter; in our species it is known to exist; though, when obstruction exists, peristalsis in the ordinary direction is quite sufficient to account for fæcal vomiting. Dr. Rosenstein, however, had seen chronic fæcal vomiting in a patient of his where no mechanical obstruction could be found. Professor Preyer stated that he had seen antiperistaltic movements of the small intestine in animals, and pointed out that the filling and emptying of the cæcum, especially of the very long cæcum of some animals, could only be effected by alternate peristalsis and anti-peristalsis.

NEW TREATMENT FOR CHORDEE.—M. Combillard recommends, in *C. Courier Medical*, to calm the pain induced in gonorrhœa, by nocturnal erections and chordee, injections containing bromide of potassium.

These injections, are not as a rule, in any degree irritating; they may be made four times daily, the last just before bedtime. The liquid should be allowed to remain one or two minutes in the urethra, in order to have the desired effect. The following is the most convenient formula :

℞. Potas. bromid., ... ʒ iss
Tr. opii, ... ℥ ss
Glycerinæ .... ʒ iij
Aquæ .... ℥ v. M.

In fifteen out of eighteen cases there was rapid diminution, or complete suppression of the erections. Bromide of potash gives these happy results, undoubtedly, owing to its anæsthetic influence on certain mucous membranes in moderating their reflex excitability.—*Med. and Surg. Reporter.*

The Blood of Animals Living at High Altitudes.—The difficulty of respiration which affects animals, as well as man, suddenly removed from plain or champaign country to lofty mountain regions is well known, whilst after residence in such regions for some time the system seems to accommodate itself to the new conditions, and exercise can be undertaken and efforts made which at first were impossible. The recent observations of M. P. Bert afford to some extent an explanation of this, for he has shown that the blood of the natives of elevated regions, and the blood of animals acclimatized to such regions of low barometric pressure, are characterized by having an unusually great capacity of absorption for oxygen, much greater than the blood of animals living at the level of the sea, and this is due to the greater richness of their blood in hæmoglobin. They have therefore a greater area for the storage of oxygen, which may be drawn upon for the usual metabolic changes of the body, and for that extra call for oxygen which is involved in the performance of violent muscular efforts. To invalidate this conclusion it must be shown that animals inhabiting mountain ranges possess a smaller absolute quantity of blood, which has not been noticed by any observer.

The Diagnosis and Treatment of Tumors of the Bladder.—The case of successful removal of a tumor of the bladder reported by Sir Henry Thompson at the last meeting of the Royal Medical and Chirurgical Society will no doubt awaken fresh interest in this important subject. We will not here repeat the many points dwelt on in the subsequent discussion, but would refer to two only—the difficulty of diagnosis, and the safety of Sir Henry's operation. All the speakers touched upon the former, none questioned the latter. From the discussion and records of cases it seems evident that while there are few removable bladder tumors, and many unremovable ones, which can be reasonably diagnosed to be such during life, there is a large number of cases in which with only his present means, the surgeon must remain in doubt. All that is wanted in these cases is to be able to *feel* the tumors. In the female, where the finger can be easily passed through the urethra, and the whole interior of the bladder explored, the diagnosis of these tumors can, we presume, always be made. Sir Henry Thompson will have done great service by his paper if it helps to draw attention to the ease and safety with which the male bladder can be thoroughly explored through a wound from the perineum into the membranous portion of the urethra. Such a wound does not interfere injuriously with the neck of the bladder, is easily made with precision, and heals readily. Every part of the viscus can be explored through it, without violence or risk, and medium sized tumors, at any rate, can be removed through it. Whether the median incision into the urethra be the best for removal of tumors in all cases, we are not now anxious to show; its superiority over others for the purposes of diagnosis we venture to think none would question, and we would recommend that in any case where a tumor of the bladder is reasonably suspected, and where other means of examination have not demonstrated that it is unsuitable for removal, the bladder should be explored by this safe and efficient means.—*Lancet.*

Rumpf on Treatment of Locomotor Ataxia with the Electric Brush.—The first case was that of a man, who ten years before, had been attacked with the characteristic shooting pains. The usual symptoms manifested themselves in the course of time: extreme ataxia, anæthesis and analgesia, abolition of reflexes, sense of fatigue, bladder disturbance, sleeplessness, &c. The electric brush was used along the back and legs, and very soon this brought about a considerable amelioration of the subjective symptoms, and the treatment persevered in for two months, when the patient declared himself prepared to resume his work. One year after this Dr. Rumpf had the opportunity of showing him to the members of the Medical Society of Dusseldorf. The only symptoms then present was the absence of the knee-jerk. Dr. Rumpf stated that he had tried the brush in a series of cases successfully, though the results require time before they can be pronounced permanent. He described one, however, in which the patient had been in good condition for two years after a six weeks' course of treatment. He had had lightning pains, paræsthesiæ and ataxia, impotence and disturbed micturition. The knee-jerk was not abolished. All the symptoms disappeared except the sexual weakness.—*Brain*, April.

A NEW METHOD OF PERFORMING INCISION OF THE CHEST.—As the treatment of empyema is now receiving prominent attention, I beg to submit to the notice of the profession a safe and easy method of incising the chest. At the point selected for the operation, I introduce my No. 2 antiseptic trocar (see *British Medical Journal*, February 25, 1882), which serves the purpose of an exploring instrument, and then forms the sheath of a probe-pointed knife. Under Listerian precautions, the india-rubber case is removed, and the inner tube withdrawn; then in its place the knife is introduced, which accurately fits the trocar, and projects a cutting edge of one inch and a quarter in length. The trocar is thus converted within the chest into a probe-pointed bistoury, and with it the required incision can be safely and rapidly made. This modification renders the performance of the operation very easy; on the other hand, an incision from without inwards is often delayed by the dense layer of lymph lining the costal pleura.—JOHN WARD COUSINS, M. D. Lond., F. R. C. S., Surgeon to the Royal Portsmouth Hospital.

FOREIGN VIEW OF OUR MEDICAL STATUS.—The progress in art, literature and science that has been so marked a feature in the recent history of the U. S. of A. has only been surpassed by that made in medicine. Instead of depending, as formerly, on reprints of imported books for their literature the citizens of the U. S. have raised a literature of their own, and their medical and other works are now taking the highest places in all European schools. Their industry, fertility of invention, boldness of action, practicality, and perseverance in patient scientific investigation, have enabled the medical men of America to advance our knowledge of the healing art by rapid strides. With them there has been none of the paralysis so deplored in some of the other schools as affecting all scientific pursuits, including medicine, and which has been so clearly traced to the attempt to reduce intellectual operations to the uniformity that constitutes the perfection of a military drill. Their institutions enjoy freedom of action, and they are determined to maintain it. In 1861 there were 57 medical schools or colleges in the U. S., each separate and independent of the other, and each having the power to confer medical degrees. Very possibly there may now be more, for the power to confer degrees is granted to all organized bodies seeking it. They allow the law of supply and demand to regulate the growth, and exclude all interference, governmental or other that might hinder free development and successful progress.—*British Medical Journal.*

KNIFE WOUND OF THE LIVER.—Dr. Wolff reports a case of recovery from a knife wound of the liver. The right lobe was affected and protruded through the external wound. The hæmorrhage was at first considerable, but was controlled by cold. The blood, on examination, was found to contain sugar. The febrile reaction was not great. The stools were of a light color. The patient became icteric three days after the receipt of the wound and there was retention of the urine, which, when drawn off by the catheter, was found to be dark and turbid. The patient made a good recovery; quinine and morphine being given internally. Cases of this kind are exceptional.—*Chicago Review.*

FUNGOSITIES OF THE FEMALE BLADDER.—Dr. Atlee publishes in the *Boston Medical and Surgical Journal* of March 30th, a case which is specially interesting at the present time, as Sir Henry Thompson has so recently, at the Royal Medical and Chirurgical Society, drawn attention to tumors of the bladder. Dr. Atlee saw his patient in September, 1880; she was a lady, aged nineteen; she was obliged to pass urine every half hour, and the urine contained a large quantity of blood. An exploration of the bladder was at once advised, and submitted to under the influence of anæsthetics. An ordinary pair of dressing forceps was introduced into the urethra, opened and withdrawn; this was done several times, and the urethra thereby fully dilated. On the introduction of the finger into the bladder, no calculus or distinct tumor was to be felt, but "about the fundus were a number of fungosities, or soft growths, some of them more than a half inch in length and about one line in thickness." Dr. Atlee scraped them away with his finger nail, and up to the date of the paper (March 1st, 1882) the young lady has remained perfectly cured. Dr. Atlee is particular to explain that the growths were not villous, but true fungosities, having anatomically the same fundamental structure as the mucous membrane from which they sprang.

EMBALMING.—The principal Italian embalmers keep their special processes a secret, although the chief steps are well known. The process of embalming is stated to consist of five steps. First, cold water is injected through the whole circulatory system until it issues quite clear; this may take as long as five hours. Alcohol is then injected for the purpose of abstracting all the water from the body; this is followed up by the injection of ether to dissolve out the fatty matter; this injection is carried on for several hours—in thin subjects for two, in very fat ones for even so long as ten hours. After this a strong solution of tannin is slowly injected, and full time is allowed for its soaking into all the tissues; this takes from two to five hours. Lastly, the body is exposed for from two to five hours to a current of warm air, which is previously dried by passing it over heated chloride of calcium. The body can then be preserved for any length of time without undergoing change, and is as hard as stone.

TREATMENT OF ASCARIDES LUMBRICOIDES.—M. Guermonprez publishes in the *Bulletin de Therapeutique* an article of considerable length on this subject, being a historical study of intestinal worms, and of the action of santonine. His conclusions are opposed to the employment of this remedy. Worm-seed (whose action is frequently confounded with that of santonine) is, says he, and has long been my favorite medicament for killing and expelling the ascaris lumbricoides; santonine, on the contrary, does not destroy the worm; it is to the parasite an excitant, which increases and precipitates its movements, and renders the organism more liable, on the one hand, to the reflex disturbances, and to intestinal obstructions on the other hand. Santonine, then, is never indicated in such cases. While the remedy would be free from harmful effect in case the parasites were young and in moderate number, it could not be used without danger, even in rational doses, if the living parasites are large and mature; or again, if they are numerous. Moreover, the purgatives appear to be the only remedies arriving at the desired result. These should however be assisted by opposing the development of the worms with careful and good hygienic care. In this regard Guersant has given us the indications which he has long observed and which cannot be too highly appreciated. He does not hesitate to avow the importance of a removal of all predisposing causes ; but this must be accompanied by the employment of animal diet and the systematic administration of those tonics and stimulants which have been found most prophylactic against the affection ; a change of diet alone not infrequently is sufficient to cause an expulsion of the worms. M. Guermonprez recommends a method which answers the indication, not of "killing the worms," but rather of rendering the digestive tract uninhabitable by them. This consists in giving, to a child from five to eight years old, three large doses of a bitters-preparation (preferably syrup of cinchona, syrup of gentian, or syrup of bitter orange peel), and then when the mucous membrane of the intestinal canal is fully under the influence of this simply administer a purgative (calomel or castor oil). He now comes to the treatment to be directed against any eggs that may remain in the stercoraceous matter. This signifies a repetition of the entire course of treatment ; and this second course results in complete cure.—*Journal de Medicine et de Chirurg.*, April, 1882.

THE "PAINTED SICKNESS" OF MEXICO.—A curious disease has been recently described, for the first time, by Dr. Iryz, of Mexico. It is known as the Painted Sickness or Mal de Pinto. It is endemic in Southern Mexico and Central America, where it seems to have existed for a long time.

It is a contagious disease of the skin, characterized by abnormal pigmentation, itching, and desquamation, a peculiar odor, and characteristic sensation on touch. The general health is not affected. There are no constitutional symptoms. It has a chronic course and may run on for many years. It is curable under treatment, however, and sometimes it ceases spontaneously.

The disease begins with a patch of discoloration upon some part of the skin, accompanied by desquamation and itchings. The discoloration spreads as a rule from this central starting point. It is unsymmetrical, and may be either discrete or confluent.

Dr. Iryz describes four different varieties of the disease, the classification being based chiefly upon the color of the patches. These varieties are black, blue, red, and white. In the first two the process is superficial, involving only the epidermis; in the latter two forms the dermis and rete-mucosm are affected.

The black and blue varieties often coexist. The surface becomes covered with dark patches, so that in extreme cases the patient looks like a negro, in mosaic. The affected part becomes somewhat raised and, though at first dry, is eventually moist and gummy. There is no pain, tenderness, or sign of inflammation.

The white and red varieties may also coexist. The patient becomes more or less covered with patches of a perfectly white, a rose, or a red tint. This gives him a variegated appearance which is the reverse of beautiful, especially when the face is affected. The diseased skin is hard, condensed, and has apparently lost most of its capillaries. Islets of dark pigment are are sometimes found in the light-colored patches. In some cases the patient's hair, as well as skin, becomes perfectly white. This whiteness is much more marked than in vitiligo, and cannot be affected by pinching or pressure. The dark patches spread much more rapidly than the light ones.

The odor is peculiar and disagreeable, resembling somewhat that from mouldy garments.

The disease is treated by attention to hygiene and the administration of large doses of arsenic.—*N. Y. Record.*

PATHOLOGY IN VIENNA.—Considerable dissatisfaction seems to exist in European Medical circles at the appointment of Prof. Kundrat, of Gratz, to the chair of Pathology, which was rendered vacant last year by the death of Prof. Heschl, the successor of Rokitansky. Prof. Kundrat has not achieved reputation by any special original research, nor does he possess unusual ability as a lecturer or teacher; he owes his appointment entirely to political influence, his father being a valet to the Emperor. He has thus been able to override the claims of such men as Arnold of Heidelberg, the nominee of the Faculty of Medicine, Klebs of Prague, Rindfleisch of Wurzburg, Cohnheim of Leipzig, any one of whom would have filled the chair with credit to the University, and would have been a more worthy successor to Rokitansky than its present occupant.

NITRITE OF AMYL AND THE CATAMENIAL FLOW.—*To the Editor of the Lancet.*—SIR,—I should be pleased to hear, through the medium of your valuable journal, whether any of your readers have observed what I believe to be a hitherto unrecognized physiological action of the nitrite of amyl. I have at present under my care a patient suffering from angina pectoris, who has been in the habit of inhaling the vapor of the nitrite to allay the spasm of that distressing complaint, and a married sister of the patient, who is suckling an infant, informs me that on entering the room, the atmosphere of which is impregnated with the vapor, the menstrual flow at once commences, and that on her leaving the room, and being no longer under the influence of the drug, it immediately ceases. The reason is, of course, perfectly obvious, but I cannot find any note of it in my books of reference. I have mentioned this to Dr. Clifford Allbutt, who has kindly seen the case of angina with me, and he suggests that as the drug might be used in such cases as puerperal convulsions, when such an action would possibly be in the highest degree prejudicial, I should be justified in giving publicity to this interesting fact.

I am, Sir, faithfully yours,
A. T. BACON.

Kirkstall-road, Leeds,
May 3d, 1882.

WINTER APOPLEXY.—During the rigorous winter of 1879–80 Dr. E. Bax observed some accidents of an apoplectiform character, of which he has described the mechanism and symptomatology in a paper read at the Medical Society of Amiens, April 1, 1880. He arrived at the following conclusions: Cases of apoplexy are more frequent during the winter than during any other season of the year. The more intense is the cold, the more numerous are these cases. The cold renders the surface of the body anæmic, augments the arterial tension, and consequently produces congestion of the viscera, and especially of the encephalon. This congestion, if it do not kill, may give rise to hæmorrhages which are not considerable if the vessels of the encephalon are fairly healthy. It is likewise possible that the anatomical constitution of the blood becomes changed under the influence of cold, and that this change is allied to the pathological phenomena observed. Dr. Bax's observation on the effect of the intropelvic action of cold in producing apoplexy is interesting, but the idea is not new in this country.—*British Med. Jour.*

SCIATICA.—In a clinical lecture on "sciatica," Mr. Jonathan Hutchinson (*Med. Times and Gazette*) says: "In nineteen cases out of twenty in which the diagnosis of 'sciatica' is suggested, there is no affection of the sciatic nerve whatever. They are simply cases of arthritic disease of the hip in one or other of its various forms,—acute gout, chronic gout, rheumatic gout, subacute rheumatism, or chronic senile rheumatism. Both by the public and the profession these cases are constantly called 'sciatica.' Our workhouse infirmaries are full of chronic cases under that name, and I speak advisedly when I say I feel sure that they are almost all examples of *morbus coxæ senilis.* Of the cases of 'sciatica' which are not hip-joint rheumatism, some are probably affections of the fascia or periosteum near to the hip; a minority are possibly affections of the sciatic nerve itself. In these latter it is the sheath of the nerve which becomes painful. The pain may be darting, or may radiate, but it does not pass down the nerve-tubules or in any way make the patient conscious of their course. The diagnosis of true sciatica is to be based upon the discovery of tenderness restricted to the trunk of the nerve and involving a considerable part of its course. Examples of this are decidedly rare, and their recognition without risk of error is a matter of great difficulty."

Bony Occlusion of Both Posterior Nares.—Dr. T. B. Wilkerson reports a case of congenital occlusion of the posterior nares by a bony septum, in a child six years of age, which he perforated by means of a new and ingenious instrument, a revolving trocar and curved canula, the drill attached to cable-screw wire; the latter being elastic, allows the handle of the trocar to be circularly rotated, whilst the curved canula remains stationary, the slit in the posterior under surface of the tube and pliability of the wire render the retraction and withdrawal of the trocar easy. The drill point protrudes beyond the end of the canula half an inch, length of trocar and canula about four inches, length of handle two and a half inches; without this instrument the operation would have been impracticable. A very satisfactory result was obtained.—*North Carolina Medical Journal*, *June*, 1882.

Scrofulous Glands.—1. That scrofulous neck and glandular scrofula elsewhere owes its origin to local causes, with or without hereditary tendency.

2. That by efficient sanitation such maladies may be prevented, even in the most susceptible.

3. That scrofula, when established, even in severe forms, lends itself easily to radical methods of cure.

4. That, especially by surgical dissection, the disease may be promptly removed, and the patient cured in a few weeks.

5. That by this method disfigurement, if not wholly averted, is reduced to the least amount.

6. That the subsequent health is after such procedure re-established in a way that is not possible under any other mode of cure, and that the risk of future phthisis or any other malady caused by septic absorption is averted.—*Clifford Allbutt, M. D.—Int. Med. Congress—in Am. Practitioner.*

Poisoning by patent medicine. Three citizens of Erie, Pennsylvania, were poisoned by patent medicine offered as a sample by an itinerant medicine vender.

Uses of Oil of Peppermint, John Meredith, M. D.—I have found the oleum menthæ pip. more effective than any other form of anodyne application I have tried, in allaying the painful neuralgic pain so often piteously complained of in cases of *herpes zoster.* These distressing pains—worse in elderly people—are complained of often when the eruption has disappeared ; but painting the affected parts over with ol. menthæ pip. nearly always affords speedy relief. I have painted the oil over the eruption when it was out in a fresh florid condition, and that with great relief to the patient. The value of this application in pains of neuralgic character deserves to be better known than it is.—*Birm. Med. Rev.* June.

Boldo.—This drug has been of marked value in cardiac debility. The oil is said to be useful in genito-urinary inflammation. Dr. Verne (Bulletin Generale de Therapeutique, April 15, 1882,) concludes that the aromatic principle, and the alkaloid boldine are eliminated by the urine. The drug itself is without influence on the circulation, temperature, and excretion of urine, but it increases the quantity of urea excreted. It has a slightly exhilarant effect. These results of Dr. Verne seem to support the claims which have been made for the drug. —*Chicago Med. Rev.*

Analysis of Dead Sea Salt.—A German chemist has made an analysis of the salts that are dissolved in the water of the Dead Sea. The result leaves hardly a doubt in his mind that this lake, traversed as it is by the Jordan, and fed chiefly by it, owes its peculiar water to a rock-salt bed, and, in the first instance, to the upper layers, which contain much magnesia. In a litre he found the following substances in the proportions named: Chloride of potassium, 16.9 grams; chloride of sodium, 74.051; bromide of sodium, 5.024 grams; chloride of magnesium, 128.105 grams; chloride of calcium, 35.355 grams; sulphate of lime, 1.211 grams—a total of 260.646 garins of salts.

The Kola or Gourou Nut.—These seeds, called also Ombémé nuts, are the produce of Sterculia acuminata, belonging to the natural order Sterculi aceæ and are known to us by accounts of West African travelers, who state that when chewed or sucked, they possess the power of rendering the flavor of water, even if half putrid, agreeable, and they were believed to contain caffein. They have recently been made the subject of analysis by MM. Ed· Heckel, and Fr. Schlagdenhauffen, who have found that they do actually contain more caffein than the best samples of coffee that could be procured, and that this base is altogether free and uncombined—not, therefore, as in the coffee berry, united with an organic base; secondly, that they contain a very appreciable quantity of theobromine, which assists the action of caffein, and possesses similar properties to that base; thirdly, which is an important fact, that they contain a considerable quantity of glucose, of which cacao presents no trace; fourthly, that the quantity of starch present is three times greater than that contained in theobroma which explains its nutritive value; fifthly, that there is but little fat, in which respect it differs notably from cacao; and, lastly, that they contain a special form of tannin, which approximates caffeo-tannic acid in its composition, and a red coloring matter, very similar to that named by Payen cacao-red. The physiological examination of this substance has shown that its properties are essentially due to the caffein and theo-bromin it contains. The seeds, it appears, have long been in use in Soudan and Western Africa, for the relief or cure of diseases of the intestines and liver; and especially in cases of atony of the digestive tract, and also as a masticatory and tonic, like the areca nuts, which are held in such high esteem by the natives of India.

Nitrous Oxide.—Further experience has not changed the relative position or very much enlarged the sphere of action of nitrous oxide. That it is the safest of all anæsthetics has been established beyond a question. In one institution where such administration is subject of record, this gas has been given over 100,000 times, and not only without a death, but without causing in a single instance symptoms sufficiently serious to necessitate transporting the patient home in a carriage. In the city of Philadelphia alone, it has been given over 133,000 times without a death, and without any injurious result. Death cannot be justly attributed to it in more than four cases since its introduction.—*F. C. Reeve, in Holmes' Surgery, American Edition.*

A very simple dropper may be made by bending a piece of glass tube at a right angle, and drawing one end out to a point. On inserting the other end into the bottle, and gently inclining the latter, some of the liquid will ascend along the tube, even before the liquid in the bottle has reached the mouth, and may be dropped at will.

The *London Lancet* says that muscarine. the active poison of mushrooms, is directly antagonized by atropia.

Ammonia Carbonate as a Stimulant.—Dr. E. P. Brewer (American Journal of the Medical Sciences, July, 1882), comes to the following conclusions respecting this salt: First. Carbonate of ammonia, administered by the rectum, cellular tissue, and intestine, is almost completely robbed of its stimulating properties. Second. By the stomach it acts with great power when the full play of the gastric juice is permitted; the converse being apparent when the acid of the gastric juice is neutralized. Third·

That the ultimate results of the chemical union is a product totally different in power and latitude of action from carbonate of ammonia. Analyses of blood made soon after the exhibition of a dose of carbonate of ammonia show an excess of ammonia. Whence it is claimed the effects of the salt are due to the liberation of free ammonia.

THE CORPORATION OF BRIGHTON *v.* THE LANCET.—In the discharge of our duty to the medical profession and the public we have been compelled to point out the existence of grave defects in the sanitary condition of Brighton, and for this performance of our function as an organ of the science of health we are now sued by the Corporation of Brighton as for a slander on the town and a libel on its authorities. We have nothing to contradict, not a word to withdraw, or a sentence to qualify, of all that we have written on this subject. If the truth cannot be legally spoken or written as to the sanitary condition of a town, it is time that this should be known, and that the public should once for all understand that the supposed guardians of their interests in the matter of health are gagged and silenced by the law. It will greatly surprise us to learn that is so, but if it be, we and our readers ought to be aware of the bondage under which the press—and particularly the medical press—lies. *Lancet.*

RESEARCHES ON LUNG DISEASE.—Fresh proof has lately been obtained by M. Giboux, of the danger in air expired by consumptives. He experimented with four young rabbits of the same litter, and born of healthy parents. Two of them were kept 105 days in a large wooden case, with side gratings, into which was introduced daily a quantity (about 20,000 cubic centimeters) of air expired by animals in a consumptive state. This operation was performed at midday and in the evening, and each time the gratings were kept closed for two hours. In another quite similar case, the two other rabbits were similarly treated, except that the impure air was made to traverse in its way to the case some wadding impregnated with carbolic acid. The rabbits in the first case, before long, showed loss of appetite, intense thirst, listlessness, diarrhœa, and loss of flesh. On being killed, both were found to have tubercles in the lungs, the liver, and the kidneys, those in the lungs being the most advanced and the upper lobes being chiefly affected. The other couple of rabbits presented nothing abnormal while alive, and no organic alteration was observed in their organs after death. They were eaten without repugnance by the author and his family. Again, observations have been recently made by MM. Grehaut and Quinquand, both on man and the lower animals, regarding the influence of injuries of the lungs (or of the bronchiæ or the pleural envelope) on the exhalation of carbonic acid. They prove that the amount of this gas exhaled is less where such disorder exists, even where there is fever. Two explanations are conceivable : the pulmonary change might bar the elimination of carbonic acid, which, in that case, would accumulate in the blood, or the injury might have the effect of diminishing the production of carbonic acid by affecting the general nutrition. Experiment favored the latter hypothesis.

A VERY RAPID HEART.—Professor Pribram is reported in the *Wiener Mediz. Wochenschr.* as saying that he has had a case of "vagus neurosis" in which the pulse reached three hundred beats a minute ! Professor Pribram must have employed Bunnell's lightning calculator in order to have counted it.

LIGATURE OF THE INNOMINATE.—Mr. William Thomson, of Dublin, favors us with an account of the termination of his case of ligature of the arteria innominata. "My patient," he says, "died on the 20th inst., the forty-second day after ligature of the innominate. There was no recurrence of bleeding after the thirty-ninth day. The sinus was found to terminate in an ulcer, which involved the anterior wall of the junction of the subclavian, carotid, and innominate arteries. The innominate and carotid arteries were filled with clot; the subclavian contained a clot occluding it to the extent of half an inch. The position of the clot was on the distal side of the ligature, the constricted portion of the innominate not being involved. The hæmorrhage had apparently taken place from the innominate, as there was a recent blood-stain on the cardiac side of the clot. None of the vessels were pervious to water forced in with a syringe. The aorta was atheromatous. Consolidation was proceeding satisfactorily in the tumor. This is the second longest survival (except Smyth's case, which recovered) on record: Graefe's case having reached the sixty-seventh day, and Cooper's the thirty-fourth.—*Lancet.*

DANGER OF HANDLING DOMESTIC PETS. — Dr. McCall Anderson, in a paper on "The Diagnosis of Diseases of the Skin," in the *Medical Times and Gazette* (p. 601), traces the development of the disease known as favus (*Porrigo favosa*) in human beings to mice suffering from the disease. Cats, which eat the mice, catch the disease, and have been known to communicate it to the children who handle them. Fowls have also been known to suffer from it. The danger of allowing children to handle domestic pets which are suffering from skin disease is probably often overlooked, and deserves to be made known more widely than it is at present.

FŒTUS IN FŒTU.—Dr. Lubimoff Kasan, Russia (*Vratch Vedomisti*, No. 1, 1882), has recently reported an interesting case of this kind. He found on a little girl born at term and living, a perineal tumor of which the right half was hard and the left half soft. On autopsy there were found two cysts in the left half. The right half contained different portions of a fœtus, a well-developed foot with six toes, a rudimentary arm, and a stomach. Between the two tumors were found small dermoid cysts containing epithelial cells, striated muscular fibre, bits of cartilage, and bones containing marrow in the interior.

CODEIA IN DIABETES.—In the *British Medical Journal*, Dr. R. Shingleton Smith relates some cases of diabetes treated by codeia, in which this drug produced very good effects. It has a remarkable power of checking the elimination of sugar, and a corresponding improvement in the health of the patient results. It would appear that alkalies and all other methods of treatment are far inferior to the treatment by codeia, which may be considered to have almost a specific action on the disease. The facts seem to justify decided language with regard to the use of codeia, which should not be permissive, but imperative, in all cases of advanced diabetes mellitus; whatever else may be given, codeia should first be given, and in fairly large doses, until some physiological effect is produced. Even dieting appears to sink into insignificance, alongside of codeia, and in one case this drug alone was sufficient without any dieting, the patient being on a mixed diet all the time.

THE TREATMENT OF CARBUNCLES.—In the course of a recent clinical lecture, delivered at the Hospital de la Charité, M. Gosselin made some interesting remarks on the above subject *a propos* of a carbuncle on the neck of a patient then presented. He advised opium and chloral for mitigation of the intense pain, and subcutaneous incisions, after the method of Alphonse Guérin, in the event of failure of these anodynes to relieve the suffering. The object of the incision is to relieve tension, to divide some of the sensitive nerves, and to afford an exit for the inflammatory products. The incisions are made hypodermically, in order to prevent the development of erysipelas, which often attacks an open cutaneous wound under these circumstances. A bistoury is usually introduced through one of the spontaneous cutaneous apertures produced by the carbuncle, and is then made to divide the inflamed tissues in a direction parallel to the surface. If there be no spontaneous opening which may be thus utilized, the bistoury is inserted through a cicatrix, and section effected, subcutaneously, as in the former instance.—*Le Medecin Practicien.*

Winter Apoplexy.—During the rigorous winter of 1879–80, Dr. E. Bax observed some accidents of an apoplectiform character of which he has described the mechanism and symptomatology in a paper read at the Medical Society of Amiens, April 1st, 1880. He arrived at the following conclusions: Cases of apoplexy are more frequent during the winter than during any other season of the year; the more intense is the cold, the more numerous are these cases. The cold renders the surface of the body anæmic, augments the arterial tension, and consequently produces congestion of the viscera, and especially of the encephalon. This congestion, if it does not kill, may give rise to hæmorrhages which are not considerable if the vessels of the encephalon are fairly healthy. It is likewise possible that the anatomical constitution of the blood becomes changed under the influence of cold, and that this change is allied to the pathological phenomena observed. Dr. Bax's observation on the effect of the intro-pelvic action of cold in producing apoplexy is interesting; but the idea is not new in this country.—*British Medical Journal.*

Syphilis Conveyed by Skin-grafts.—Another case in which syphilis was conveyed by skin-grafts is reported in Paris by M. Féréol. It occurred in the practice of M. Deubel; the patient was a man, aged forty-nine, who had not had any venereal affection, and who had a large wound caused by erysipelas with sloughing. Seventy-five dermo-epidermic grafts were put on, nearly all of which "took," and cicatrization was rapidly effected. A month after the application of the first grafts the cicatrix began to ulcerate in several places. Six weeks later an abundant roseolous eruption broke out over the body, and a month later mucous patches appeared in the mouth. One of the sons of the man, who had furnished grafts on each occasion, then consulted M. Deubel for mucous patches about the anus, and stated that eighteen months previously he had had a hard chancre for which he had not had any treatment. The case is apparently beyond all doubt, and shows the necessity for caution in the selection of persons from whom grafts are taken. The safest rule to follow is, wherever possible, to take the grafts from the person on whom they are to be implanted.

Novel Cure for Neuralgia.—A Tennessee Physician's Experience with Ether Spray.—In the spring of 1869 we had the most severe attack of facial neuralgia which it has been our lot to witness in more than eighteen years of practice; for two weeks we had to confine ourselves to a darkened chamber, and the lightest footfall on the floor caused us the most excruciating agony. All the remedies, local, general, regular and irregular, were tried without any abatement of the trouble. One side of our face was terribly swollen, so much so that it was impossible to extract a decayed molar, to which we charged all our suffering, and it seemed as if we were destined to shuffie off this mortal coil by exhaustion from pain and want of sleep. We finally concluded to incise the swollen jaw, thinking there was an abscess about the root of the decayed tooth, and as the parts were so extremely sensitive, and, moreover, having a vague dread of chloroform, we thought we would try local anæsthesia by evaporating ether on the surface until the part was frozen. Our attendant complied with our instruction, and the spray was turned on. The first sensation was one of cutting pain, gradually subsiding until when congelation took place we felt perfectly easy, and ordered the cutting operation deferred. Then for fifteen hours we slept the sleep of the righteous, and when we awoke found the *rubor et tumor, colore, cum dolore* entirely vanished, and we arose and went about our business; and to this good day, although we carry a perfect cabinet of curious teeth in our mouth, have never had a neuralgic twinge or touch of that "hell o' a disease," a toothache. Well, to be honest about it, we did not at the time give the freezing process any credit for the cure; we thought the attack had about spent its force and was going to act well anyway, and we paid but little attention to the matter for a year or more, when a relative, Capt. Harris, was visiting us, and took a spell of neuralgia, which he had for over a year been periodically afflicted with, rarely passing a month without an attack. To give him present ease, for we did not think of any permanent benefit, we tried the spray all along the track of the affected nerve, and until it turned the skin white. The relief was immediate, and, he has since informed me, permanent.

Since then we have used it in fifteen or twenty cases with uniform success, never having to make more than two applications, and it came to be a stock remedy, and we thought that in all probability was so with most physicians; for we remember that when Richardson first introduced it (like all new things in medicine, it was vaunted for everything), and would probably have still thought so if a gentleman hadn't called on us some time ago to know if we hadn't a new treatment for neuralgia, and stated that a couple of years ago he was on a steamboat and was suffering with that disease when Capt. Harris informed him that he was cured by some sort of a freezing process, and advised him to try it. When the boat reached Louisville he called on two or three dentists and three of the most distinguished surgeons of the city, and they told him they knew of no such remedy for neuralgia, and advised him not to have anything of the kind done. On hearing his story we looked over old medical journals and found not a single allusion to local anæsthesia as a remedy for neuralgia.

Now we must confess that all this sounds very much like the story of the superannuated clergyman who accidentally, while in the West Indies, discovered a cure for consumption, only we don't want any one to send a stamp for particulars. Any physician can purchase a hand-ball atomizer for $1.50, and try it. They may use either rhigolene or ether, and it will only be necessary to let the spray play upon the part until the skin turns white. We promised to offer no theory for its action, but we will venture this opinion: That the intense cold, by the revulsive effect, causes a complete change in the nutrition of the nerve; what this change is we will not at present venture to assert, only hoping that others who have better opportunities will give the matter a trial and fully test it.—Dr. McColganan in the *Southern Practitioner*.

SUDDENLY TURNING GRAY.—Staff-surgeon Parry, while serving in India during the Mutiny, saw a strange sight. Among the prisoners taken in a skirmish at Chamda was a sepoy of the Bengal army. He was brought before the anthorities, and put to the question. Fully alive to his position the Bengalee stood almost stupefied with fear, trembling greatly, with horror and dispair plainly depicted on his countenance. While the examination was proceeding, the by-standers were startled by the sergeant in charge of the prisoner exclaiming. "He is turning gray!" All eyes were turned on the unfortunate man, watching with wondering interest the change coming upon his splendid, glossy, jet-black locks. In half an hour they were of a uniform grayish hue.

Some years ago a young lady who was anxiously awaiting the coming of her husband-elect, received a letter conveying the sad tidings of his shipwreck, and death. She instantly fell to the ground insensible, and so remained for five hours. On the following morning, her sister saw that her hair, which had been previously of a rich brown color, had become as white as a cambric handkerchief, her eyebrows and eyelashes retained their natural color. After a while the whitened hair fell off, and was succeeded by a new growth of gray. This case, coming under the observation of Dr. Erasmus Wilson, shattered his unbelief in the possibility of the sudden conversion of the hair from a dark color to show-white. No man knows more about the hair than Dr. Wilson; but he is at a loss to explain the phenomenon quite to his own satisfaction.

"If it be established that the hair is susceptible of permeation by fluids derived from the blood—a transmission of fluids from the blood-vessels of the skin into the substance of the hair really occurs, the quantity and nature being modified by the peculiarity of constitution or state of health of the individual—it follows that such fluids, being altered in their chemical qualities, may possess the power of impressing new conditions on the structure into which they enter. Thus, if they contain an excess of salts of lime, they may deposit salts of lime in the tissue of the hair, and so produce a change in its appearance from dark to gray.

"Or the phenomenon may be the result of electrical action; it may be the consequence of a chemical alteration wrought in the very blood itself, or it may be a conversion for which the tissue of the hair is chiefly responsible." So many "may be's" from such an authority prove that the mystery of the sudden whitening of the hair is yet unsolved. It is likely to remain unsolved, since the doctor—more modest than many of his brethren—owns that "the mysteries of vital chemistry are unknown to man."—*From "Sudden Whitening of the Hair," in Popular Science Monthly for August.*

REMARKABLE CRIMINAL HEREDITY.—Most readers are acquainted with the history of "Margaret, the Mother of Criminals," as she has been called, who was born in a village on the Hudson river, in the northern part of the State of New York, about 100 years ago. Dr. Elisha Harris, of the city of New York, is authority for the following statement, which is the result of his personal inquiries: "Margaret was a pauper child, left adrift in one of the villages on the upper Hudson, about ninety years ago. There was no almshouse in the place, and she was made a subject of outdoor relief, receiving occasionally food and clothing from the town officials, but was never educated nor sheltered in a proper home. She became the mother of a long race of criminals and paupers, which has cursed the county ever since. The county records show two hundred of her descendants have been criminals. In one generation of her unhappy line there are twenty children, of whom seventeen lived to maturity. Nine served terms aggregating fifty years in the State Prison for high crimes, and all the others were frequent inmates of jails and almshouses. It is said that of the six hundred and twenty-three descendants of this outcast girl two hundred committed crimes which brought them upon the court records, and most of the others were idiots, drunkards, lunatics, paupers or prostitutes. The cost to the county of this race of criminals and paupers is estimated as at least $100,000, taking no account of the damage they inflicted upon property and the suffering and degradation they caused in others."—*Pacific Medical and Surgical Journal.*

AN IRISH HERMAPHRODITE.—Two Irishmen, having been rather intimate with a certain young woman, were compelled by other members of the family to make provision for the prospective offspring. If it turned out to be a boy, by mutual agreement, Pat was to take care of it; if a girl, that duty was to devolve on Mike. After several months of suspense, Mike came one day running towards Pat, his face beaming with a smile of the utmost satisfaction. "Hello, Pat, the bloody thing has come!" "Well," says Pat, "what is it, a boy?" "No." "What then, a girl?" "No, it's a d—d naygur."—*Obst. Rev.*

ONE OF OUR INSTITUTIONS.—In 1879 the late Dr. Choppin, convinced that our privy-saturated soil was at least a partial cause of certain forms of preventable disease, set on foot an inspection of that New Orleans temple of liberty and independence, the privy vault.

A venerable gentleman, whose temple was investigated and ordered emptied and deodorized, delivered himself as follows. We give his speech here, as a revelation of the deep-seated feeling of many good people and their indignation at the invasion of their ancestral treasures proposed by iconoclastic reformers, who have no reverence for ancient smells:

"Le Doctor Choppin! Oui! He come with his acid carbolique. He look to mine vault. Mine fater he make cet vault. I hold him from mine fater. Mine fater use him. I use him. Our families use him. More as fifty years since he was built. He nevare was empty. Why? Nobody complain. He was always good. Now come le Dr. Choppin. He make one mauvais smell wiz his carbolique. He say I muss empty cet vault. I will not him empty. He is good vault. He is the vault of mon pere. I shall not him empty. He smell strong, but he make de good health. I know him. Le Doctor Choppin he wat you call humbug wiz his acid carbolique. Got him tam!"—*New Orleans Times.*

TREATMENT OF SCARS ON THE FACE.—A most important branch of cosmetic surgery is treated by Dr. C. L. Bull, of New York, in a reprint from the *Transactions* of the Ophthalmological Society. He says: "Persistent rubbing and kneading of scars of the face, both those due to burns and those resulting from bone caries, as preparatory to blepharoplasty, have, in a number of instances in the writer's experience, yielded most excellent results. Adhesions of scars, slight or extensive, to the subjacent parts, have been slowly, cautiously and painlessly detached, and a gradual absorption of the firm material in the dense part of the scar has been brought about. So considerable has been the result obtained in some cases that the writer has come to regard this gradual extension and loosening as an important part of the treatment in these cases." When one reflects on the amount of mental misery these scars cause, their removal becomes an object of great importance.

DR. JOHN S. BILLINGS OF MEDICAL ETHICS.—"Let us take a concrete example. You treat a case of pemphigus with arsenic. You may theorize as you like about the essential nature of pemphigus; you may select arsenic because you think it would produce the disease, or because you think it produces something contrary to the disease, or for no reason whatever beyond the empirical fact that you have seen a case of pemphigus recover under the use of arsenic. Also, you may give this arsenic alone, or combined with other substances, and in any doses that you please, from the decillionth of a grain to a grain; and you may explain the results as you like. But as an educated physician and a gentleman, you may not advertise yourself as an arsenio-pemphigist, and denounce everyone who does not adopt your theory and practice; and as there is a good deal of common sense truth in the old adage that a man may be known by the company he keeps, you will not have more to do than you can help with the men who do so advertise themselves; and still less will you have to do with those who advertise themselves as anti-arsenio-pemphigists, and then treat their cases with arsenic after all, and claim the results as due to dynamized brickdust."

RHYTHMICAL CONTRACTILITY OF THE SPLEEN.—Dr. C. S. Roy, London, England, (Cambridge *Journal of Physiology*, January, 1882,) has recently been investigating the changes in volume in the spleen by means of an instrument of his own invention, and has arrived at some remarkable results. He has arrived at the conclusion that the circulation through the spleen differs from that of other organs in one important particular; the force which impels the blood through it is not that of the blood pressure in the arteries. The splenic circulation is chiefly carried on by a rhythmic contraction of the muscles of the capsule and trabeculæ of the spleen. This rhythmical contraction is very regular, varying but slightly under any circumstances. Changes in arterial blood pressure have little to do with the volume of the spleen. Stimulation of the central end of a cut sensory nerve, or of the medulla oblongata causes contraction of the spleen. Stimulation of both splanchnics, and both vagi causes a rapid contraction ; after section of these four nerves stimulation of a cut sensory nerve still causes contraction. This fact seems to indicate that the rhythmic diastole and systole are maintained by some mechanism within the spleen itself. These researches are of special interest.

VOMITING OF URINE.— Generali and Tovini report in the Cronica Medico Quirurugica de la Ebana, a case of a lady who had inflammation of the lung, following which she had an attack of peritonitis with serous effusion into the peritoneal cavity. The patient had a sudden decrease of urine, and at the same time vomited a fluid looking like urine; a chemical analysis was instituted and the fluid was found to contain urea, phosphates, chlorides, alkaline sulphates, magnesia phosphates, carbonic acid and pigment. Microscopically, epithelial cells from the stomach and œsophagus, mucous, and crystals of uric acid. As long as the urine was discharged in this way not a drop could be obtained from the bladder. After one month the patient recovered.—*Journal Medicine de Paris.—Ann Arbor Physician and Surgeon.*

THE FUNCTION OF THE INTESTINAL JUICE.—Professor Dana, of New York, has recently been experimenting on the function of the succus entericus. His mode of procedure was to open the abdomen of an etherized animal, to ligature each end of a loop of ileum one to two feet long, then wash out this loop of intestine, inject albumen, fat, or starch, return the intestine, close the wound in the abdominal wall, and examine the contents of the intestine after four or six hours. He found that the intestinal juice had the power of converting coagulated white of egg into peptone, and hydrated starch into sugar. He failed to get any evidence of its power of digesting fats.

ALCOHOL AT MEALS.—Before quitting the subject of dining, it must be said that, after all, those who drink water with that meal probably enjoy food more than those who drink wine. They have generally better appetite and digestion, and they certainly preserve an appreciative palate longer than wine-drinkers.—*Sir Henry Thompson.*

PROLAPSUS OF THE FUNIS.—Prof. Depaul (*Gaz. des Hop.*), stated that in twenty years he had met with this occurrence at the Hopital de Clinique 143 times in 16,613 labors, *i. e.*, 1 in 116.

CREMATION.—It is not enough that some States give their dead paupers and criminals to the colleges, for the number of medical colleges is greater than the number of the subjects thus obtainable. But there is one way, at least, out of the difficulty. Let every medical student solemnly swear, as he stands with uplifted scalpel before his first subject, that in return for the privilege of dissecting others he agrees to give up his own body after death for a like purpose. The medical fraternity owe it to their successors to form a mutual dissecting league, and thus render themselves independent of the general public, and at the same time win the respect of those who now blame them for encouraging grave robbing, an offence that none of them defend except when absolutely necessary.—*Scientific American.*

SUB-TERRENE TEMPERATURE. — The deepest mine in the world, according to Prof. H. Hoefer of the Académie Imperiale des Mines, is the Przibram silver mine in Bohemia. The lowest depth is nearly 3,300 feet below the surface. At this depth the temperature of the rocks is only 75.90° F.; and the temperature of the air 76.3° F.

Dr. Silver, for many years intimately associated with the editorial department of the *Medical Times and Gazette*, died on the 16th ult., aged 41. He is best known as the editor of Hooper's *Vade Mecum*, and as the author of a small work on "Practice of Medicine." He was a physician to Charing Cross Hospital, and a very popular teacher in the school.

At a meeting of the Medical Board of Charity Hospital, held July 1st, at the Academy of Medicine, the following memorial resolutions were passed:

Whereas, at the end of a long life devoted to the relief of human suffering and the exaltation of the profession of which he was an honored and devoted member, James Rushmore Wood, M. D., LL. D., a consulting surgeon of this hospital, has been taken from us; and

Whereas, when such a life is ended, it becomes those who have been associated with, and have profited by, his labors, to give official expression to their sense of the great loss they have sustained; therefore,

Resolved, That we, the members of the Medical Board of the Charity Hospital, appreciating his noble and generous character, his unselfish devotion, his large-hearted and open-handed charity for the poor and distressed, and believing that his best eulogy and most lasting monument will be found in the record of his life—here add our tribute to his memory, our acceptance of the value of his example, and our pride that his name and his labors have a place in the records of our profession, tendering to his family and friends our sympathy in their grief.

Resolved, That these be a part of our minutes, and be forwarded to the widow and the Honorable Board of Commissioners of Charities and Corrections.

J. F. Ferguson, M. D.,
Joseph W. Howe, M. D.,
W. M. Chamberlain, M. D.,
} Committee on Resolutions.

W. T. White, M. D., President.
Edward S. Peck, M.D., Secretary.

Corrugated Paper as a Splint.—Dr. Walter Pye gives an account (*British Medical Journal*) of a new splint, which he has found of great value. Its most important feature is flexibility combined with stiffness. It is made of a material known as corrugated paper, and is very cheap and light. Dr. Pye says:—"From the purely surgical point of view, I have found this currugated paper extremely useful. It can be used in all cases in which the expensive kettle-holding splinting has been employed, and makes about the best angular splint for the elbow I have ever seen. The commercial use to which this paper is put is either that of packing wine bottles in cases, or else of enabling single bottles to be wrapped in a parcel not indicating its contents." The corrupated paper thus used in surgery by Dr. Pye is of American invention.

—Dr. Hayne, in the *North Carolina Medical Journal*, strongly condemns kissing, from its liability to propagate disease, and cites the case of a young man in the secondary stage of syphilis conveying the disease by kissing to a child sixteen months old, the child in turn giving it to the mother.

Curious Partial Loss of Memory.—An English scholar, during a holiday excursion in the Hartz Mountains, subjected himself one day to a severe physical strain, which produced a singular mental disturbance. He was on his feet from morning till night, and in the course of the day's wanderings, made several arduous ascents, taking no rest, and neither eating nor sleeping. At night, when he reached a place where he could supply his needs, he was unable, to his great astonishment, to recollect a single word of the German language, although he ordinarily spoke it with fluency. His memory did not fail him in any other respect; he knew his own language as well as ever, and recalled perfectly all the incidents of the day. As soon as he had thoroughly rested, and had eaten the food which he procured by signs, his German returned to him completely.

It is probable that such temporary aberrations of memory are more frequent than is commonly supposed, and that they may help to account for some of the otherwise unaccountable failures of men in responsible places to do their duty. An engineer, or switchman, or signalman, whose hours of labor are excessive, who has been nervously exhausted by domestic anxiety or bereavement; or who has criminally wasted his strength by dissipation, or lost his sleep by unwise frolicking, is liable at any moment to forget the simple duty upon the right performance of which may hang the safety of hundreds. If it were not for the fortunate circumstance that routine duties become so wrought into the organism that men will perform them automatically, the overtaxing of men's energies by corporate selfishness, or individual misfortune or folly, would much more frequently result in disaster.

THE REGULATION OF DREAMING—A French investigator, M. Delaunay, finds from experience upon himself that the character of his dreaming may be controlled by stimulating various portions of the brain by means of heat. By covering his forehead with a layer of wadding he gets sane, intelligent dreams. He has also experimented on modes of lying, which favor the flow of blood to particular parts, increasing their nutrition and functional activity. He has observed that the dreams he has while lying on his back are sensorial variegated, luxurious. Those experienced when on the right side are mobile, full of exaggeration, absurd, and refer to old matters, but those produced when on the left side are intelligent and reasonable, and relate to recent matters ; in these dreams one often speaks.

These observations may be correct so far as Mr. Delaunay is concerned, but most people who venture to lie on their back, especially after eating, are apt to find their dreams anything but luxurious.

WAR HANDKERCHIEFS.—The ancient custom of illustrating pocket handkerchiefs for the amusement and instruction of children has been seriously emulated by the French War Office for the benefit of the national army. The cotton handkerchiefs provided for the French soldiers are now decorated with special texts and cuts for the technical and sanitary instruction of the wearers. The centre is occupied with the Cross of the Legion of Honor upon a red background, and the inscription underneath *Honneur et Patrie.* Around this central point are grouped a circle of medallions, containing representations of officers of all grades, from the modest sub-lieutenant to the commandant of a *corps d' armee.* The different uniforms are pictured so distinctly that the French private can tell at a glance to what grade any officer whom he sees may have attained. The special pocket handkerchief prepared for the infantry soldier has exact drawings of the arms used by him, with explanations of their mechanism. The borders of the handkerchiefs are hemmed in with a framework of the national colors, and within this framework are printed a number of sanitary precepts to be observed on march and during a campaign. Here are some of the marching advices: "Wear the cravat loose. A strip of flannel day and night around the body in order to keep off the diarrhœa. Quench thirst with very small quantities of wine, coffee, vinegar and water, or brandy and water. Take a piece of bread and a little coffee before the march. Spirituous drinks do more harm than good. Drink water neither hastily nor too cold. In quarters wash face and hands, and when possible the whole body. Wash the feet and rub in a little fat or brandy. Next cook the soup, and do it at once, even though feeling quite tired out."

A MARVEL OF SURGERY.—Dr. Roswell Park writes from Prague : "I have had the pleasure of a rather extended interview with a patient whose larynx and epiglottis Prof. Gussenbauer removed over two years ago. Six weeks after the operation, he began to wear part of the artificial larynx, and, after accustoming himself to this, he gradually learned how to introduce and use the reed which takes the place of the vocal cords. This apparatus was made for him by Rothe, who has also done some work for the Reese Hospital. The patient is a riding teacher, is reputed the best rider in Prague, is busy from morning to night, talking all day, and suffers not the slightest inconvenience or pain. His voice is, of course, very monotonous, but his enunciation is excellent, his speech perfectly intelligible, and he eats and drinks with perfect facility. Three intralaryngeal operations had been previously made, before Gussenbauer attempted his feat. This case is said to be the best living example of what the art of the surgeon and the mechanician can accomplish for such a terrible disease as cancer of the larynx.—*British Medical Journal.*

DIABETIC PHTHISIS.—Leyden (Zeitsschrift fur Clinische Medicin. Band IV.)calls attention to a form of pulmonary phthisis arising from diabetes. The clinical phenomena of this disease are an insidious onset, an absence of febrile phenomena, few constitutional symptoms, slight expectoration, and infrequent hæmoptysis. Its progress is generally rapid. The automatical results of the disease are a predominance of endarteritis obliterans in the inside of patches of cheesy change. Leyden does not regard the disease as having an infectious origin. He looks upon it as having a purely local change arising from cardiac feebleness and the alteration of the blood due to diabetes.

ERUPTIONS FROM POTASSIUM IODIDE.—Dr. E. Besnier (Annales de Dermatologie et de Syphilis, p. 168, 1882) reports two cases in which the injection of potassium iodide was followed by a skin eruption. The first case, a woman of sixty-five, received fifteen grains of potassium iodide per diem ; this was followed by a bullous eruption, which disappeared on the potassium iodide being stopped, to reappear on a fresh ingestion of the drug. The second case, a man of forty was attacked by an anthracoid eruption upon taking thirty grains of potassium iodide a day. That the eruption was due to the drug was shown by its disappearing on the stoppage of the medicine, and its again breaking out on the patient taking a fresh dose of the drug.

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MEDICAL NEWS.

The Illinois emigrant inspectors vaccinated six thousand emigrants during July. ——Dr. Orange, Superintendent of the Broadmoor Lunatic Asylum was attacked and nearly killed by one of his patients. ——A new medical school has been established in Sydney, Australia.——The British Medical Association will celebrate its semicentennial anniversary August 8, 1882.——Dr. A. Buchanan, Professor of Physiology in the University of Glasgow, died July 9 aged eighty four years.——Dr. Bings Wanger has been appointed Doctor of the psychiatrical clinic of Jena, Germany.——FIRING ALLEGED TO BE HEARD 1,000 MILES.—For the first time in history the progress of a great naval engagement has been consecutively reported by the telegraph. A novel member of the fleet before Alexandria was a telegraph ship, through which, by means of the Mediterranean cable line, the War Office in London and the civilized world were kept informed of the movements of the war vessels and the results of the firing. The nearest cable station from Alexandria was at Malta, distant about 1,000 miles from the scene of the battle. A press dispatch says that when a telephone was attached to the Malta end of the cable the firing of the guns at Alexandria could be distinctly heard, though no oral communication was possible over that length of cable. It is not stated whether a telephone transmitter was used at the Alexandria end, or whether the general electrical disturbance, caused by the explosion of the great guns, so affected the cable as to report the shots, through the telephone, at Malta.——THE UNIVERSITY OF VIRGINIA.—A correspondent of the *New Orleans Medical and Surgical Journal* writes as follows of the University of Virginia : "Had our Southern neighbors no other boast, they might well be proud of that University. Let us see what percentage of each class is graduated there. I have accurate data for two years only. In 1878–79 there were 53 men in the medical class; 48 of these applied for graduation, and 21 alone were successful. In 1879–80 there were 46 in the class; 31 applied and 10 only graduated. I had almost as soon be one of those 10 as a survivor of the 600 at Balaklava. Can we wonder at the small classes there? But the men of that faculty prefer a small class to a large one, where the pen [which titles a fool tells a lie at every stroke.——PROFESSOR NOTHNAGEL. — The important post of Professor of Clinical Medicine and of Special Medical Pathology and Therapeutics at Vienna, vacant by the death of Duchek, has been conferred on Nothnagel of Jena. No better selection could have been made. The names of few German physicians are more widely known in this country than that of Nothnagel, in consequence especially of his book on the topical diagnosis of brain diseases. His other works, however, have been very numerous, and very valuable. They are chiefly on subjects relating to nervous pathology, but several of the most noteworthy are outside this region. His Handbook of Materia Medica, written in conjunction with Rossbach. is one of the best in any language, and we have recently called attention to the remarkable researches on the symptomatic significance of the fæces and the diagnosis of obscure intestinal affections, researches which are among the most thorough able, and valuable ever undertaken. The new professor was born in 1841, and is therefore just forty-one years of age.——VOLUNTARY POWER OF DISLOCATION.—The American acrobat Warren, whose exhibition of his remarkable power of voluntarily producing dislocation of several joints excited recently much attention in Glasgow is now in London, and on Monday last was introduced to the Medical Society of London by the President, Mr. Francis Mason. He has also appeared at several of the London hospitals.——The Council of the Society of Arts have awarded the Albert Medal of the Society for the present year to M. Pasteur, Member of the Institute of France, for "his researches in connection with fermentation, the preservation of wines, and the propagation of zymotic diseases in silkworms and domestic animals, whereby the arts of wine making, silk production, and agriculture, have been greatly benefited."——A GREAT PRIZE. — The Royal Academy of Medicine of Belgium offers the tempting sum of 8,000 francs for a sufficiently worthy essay elucidating by clinical facts, and if need be by experiments, the pathogenosis and therapeutics of diseases of the nervous system, and especially of epilepsy. The essays must be handed in by December 31, 1883. A sum of from 300 to 1,000 francs will be given to any author whose essay, will not meriting the prize, deserves some recompense. The sum of 25,000 francs will be given to any one who makes any special progress in the therapeutics of diseases of the nervous system, such as a discovery of a remedy for epilepsy. ——DR. WILLIAM H. MUSSEY, of Cincinnati, who was struck with apoplexy on Monday died in that city at 1 o'clock next evening. Dr. Mussey was one of the most distinguished and public spirited of the citizens of Cincinnati; he was born in Hanover, N. H., Sept. 30, 1818: studied medicine in the Ohio Medical College, and was graduated Doctor of Medicine in 1848. He subsequently studied 18 months in Paris, and upon returning to this country settled in Cincinnati, where he made a specialty of general surgery. He was Vice-President of the American Medical Association in 1864, and afterward Vice-President of the Ohio State Medical Association. He also held various eminent positions in hospitals and colleges. He was commissioned brigade Surgeon October, 1861, and Lieutenant-Colonel and Medical Inspector of the United States Army in June, 1862, and was Surgeon-General of Ohio for several years. He was also President of the Natural History Society of Cincinnati. As a memorial of his father he founded the Mussey Medical and Scientific Library in Cincinnati, and gave several thousand valuable publications for that purpose. In the Spring of 1857 he married Caroline W. Lindsly, of Washington, D, C.——MYOPIA IN FRANCE.—It is stated in the report of the committee, which was appointed some time ago by the French Government to inquire into the prevalence of short-sightedness among the youths at the great Government schools in France, that the cause of the infirmity is to be found in the fact that the school books are printed in type which is too finely cut, and further, that the custom of printing upon white paper is still more hurtful. They recommend, therefore, that the authorities should consider the advisability of substituting thicker characters in the books, and also printing in white letters upon tinted paper.——AT THE meeting of the Pathological Society of London, held on Tuesday last, the President announced that Professor Donders, of Utrecht, Professor Panum, of Copenhagen and Professor Pasteur, of Paris, were unanimously elected honorary members of the society. The announcement was received with applause by a crowded meeting.——WHAT a learned physician of New Albany, Ind., pronounced to be a cancer in a boy's throat was discovered by the mother of the child to be caused by a beard of wheat three inches long and containing eight grains of the cereal——A REPORT has been spread that the horrible disease known as the plica polonica has made its appearance in London, brought over by the traders in false hair from Poland. The disease is one of the most horrible kind, incurable, and rendering its victim an object as hideous to behold as the leper of the East. The hair, instead of dividing into fine and silky threads, conglomerates into thick matter, with only one thick root, which bleeds on being cut so that no relief can be obtained, save by cauterization of the whole mass. The report has caused a greater scare than any produced by the Fenians.——MALARIOUS fever, in an epidemic form, has of late been very fatal in the Mauritius. During April alone, there were no fewer than five hundred and ninety-six deaths, and these, unhappily, included some of the prominent officials of the island. The death-rate from fever has been higher than in the previous five years.——THE Boylston Prize Essay by Harvard University has been obtained by Th. M. Dolan, F. R. C. S. Ed., Halifax, Yorkshire; value of prsze 300 dollars (£61 5*s*. 9*d*.), the subject of the essay "Sewer Gas."——MUCH sickness and mortality prevails among the laborers employed on the works of the Panama Canal. During the greater part of the year the heat is very intense; but the total absence of any proper sanitary arrangements is said to be a far greater factor in the production of disease than the unhealthiness of the climate. The French have, however, commenced the erection of hospitals.——DR. H. J. BIGELOW.—After thirty-three years' connection with the medical school and hospital of Harvard College, Dr. Henry J. Bigelow has retired, and his resignation of the Professorship of Surgery was accepted at a meeting of the Board of Overseers of Harvard College on June 8th. Afterwards Dr. Bigelow had to submit to a visit from an "interviewer," and his conversation is reported in the *Boston Daily Advertiser* of June 9th. Referring to the great advances that have been made in surgery within his experience, he mentioned anæsthesia as the first, and he incidentally states that it was from his pen that the first article on ether as an anæsthetic came.——DEATH OF DR. ANDREW BUCHANAN OF GLASGOW.—We regret to have to announce the death of Dr. Andrew Buchanan, the Professor of Physiology in the University of Glasgow. The sad event took place on the 9th July. Dr. Buchanan had attained the ripe age of eighty-four years, thirty-five of which were spent as Professor of Physiology. Appointed surgeon to the Glasgow Royal Infirmary at a comparatively early age, he filled this post with marked success, and his name will always be associated with his modification of the operation for the removal of stone from the bladder by means of a rectangular staff. Experience and research have also conclusively proved the truth of his theory as to the production of fibrin in the coagulation of fluids. For some years prior to his death, Dr. Buchanan had retired from the more active duties of his profession to enjoy the rest he had so well earned, but he was at all times ready to give a helping hand to any good cause towards the prevention of disease and the alleviation of suffering. His loss will be much regretted by a large circle of friends.——Among the appointments that have recently been announced as having been made in the medical department of the University of the city of New York are the following:—Dr. William H. Thomson, Professor of Diseases of the Nervous System (in addition to the Professorship of Materia Medica and Therapeutics); Dr. Lewis A. Stimson, Professor of Surgical Pathology (instead of PathologicalAnatomy); Dr. Stephen Smith, Professor of Clinical Surgery (instead of Orthopædic Surgery; Dr. Herman Knapp, Professor of Ophthalmology; Dr. F. R. S. Drake, Clinical Lecturer on Practice of Medicine; Dr. N. M. Shaffer, Clinical Lecturer on Orthopædic Surgery; Dr. Joseph E. Winters, Clinical Lecturer on Diseases of Children (in addition to being Demonstrator of Anatomy); Dr. William C. Jarvis, Clinical Lecturer on Laryngology; and Dr. Lawrence Johnson, Lecturer on Medical Botany.——Mr.Charles G. Francklyn, in whose seashore cottage President Garfield died, has just founded and endowed a sanitarium for poor children, at Elberon, in memory of his young daughter, Gladys Francklyn, who died recently in Paris.——Dr. B. W. Richardson, nothing daunted by the work of resisting the drunkenness of the age, has just been presiding at Exeter Hall, over the foundation of a Society for the Suppression of Juvenile Smoking. We heartily wish the society success.——A FRENCH TRIBUTE TO SURGEON GEORGE A OTIS.—The *Union Medicale* for July 18, 1882, has a long obituary notice of the late Surgeon G. A. Otis, which commences with the following lines: "The great surgical name, which was extinguished in Washington on February 22, 1881, did not owe its reputation to the *eclat* of a teacher, operative skill, or an appreciative practice; but it was in the modest duties of a ministerial department that the author of the Surgical History of the War of the Rebellion was able to erect the most important monument extant of military surgery."——Prof. Marey, of the College of France, has been decorated with the Officer's Cross of the Legion of Honor.——A NEW INSANE ASYLUM IN ARKANSAS.—The new insane asylum at Little Rock, Arkansas, will be ready for the admission of patients in January next.——In Kent, England, a band of young men, it is said, have established a society for the "Protection of the Natural Form of Woman," and, according to one of the rules of the society, bind themselves "by demonstration, argument and entreaty, to induce their sisters and all ladies who are injuring their bodies for the sake of fashion, to sever the remaining link which connects the present generation with barbarism." By another of the laws the members promise to live a life of protest against the fashions so prejudicial to health.——HOMŒOPATHY IN AMERICA.—During the last month the American Medical Association had its annual meeting, and one of the earliest proceedings at it was the exclusion by unanimous vote, of representatives of the New York State Medical Society. The reason for this extreme step is that some months ago the peccant society passed a resolution authorizing its members to consult with homœopaths, and this proceeding was very properly resented by the whole profession in America outside erratic New York. Hence the vote of the Association, which fortunately comes in good time to guide the British Medical Association at its approaching session.—*London Medical News.*——The report of the Select Committee of the House of Lords to inquire into the state of the law relating to the Protection of Young Girls, establishes the fact of the existence of a trade in girls between England and Belgium for immoral purposes. The committee also prove that juvenile immorality is alarmingly on the increase, and that cases are known of children following the profession of prostitutes from an incredibly early age. They recommend that the age of irresponsibility in girls should be raised; that persons shall be guilty of a misdemeanor who harbor girls under seventeen for immoral purposes; that girls under sixteen soliciting in the public streets shall be sent to industrial schools; and that the enforcement of the law shall be more rigorous in the case of street-walking.——T. Spencer Wells, the celebrated Ovariotomist, has recently been elected President of the Royal College of Physicians of London. He has recently published a work on the "Diagnosis and Treatment of Uterine and Ovarian Tumors," giving the record of 1,000 operations.——Mr. Herbert Spencer is on a visit of several months to this country.——The remains of the anatomical subjects of Paris are hereafter to be cremated.——Amongst the ample stores to be sent from England to Egypt are four steam ice machines, the use of which will be taught to members of the hospital corps. Every field hospital will have its ice box, which will be filled with fresh ice every day.——The *British Medical Journal* now issues eleven thousand copies weekly; though some American journals have claimed as large a number, this is probably the largest circulation of any medical paper in the world.——Mr. T. Spencer Wells, Surgeon to the Queen's Household, has been elected President of the Royal College of Surgeons of London. ——Dr. George J. Grimes, of Columbus, Ga., reports (Atlanta *Med. Register*) a successful ligation of the femoral artery, for traumatic aneurism.——The determination of Professor Billroth to retain his connection with the University of Vienna rather than to occupy the chair of his teacher, Langenbeck, in Berlin, has touched the hearts of the Viennese students, who have given an ovation to the renowned Austrian surgeon. An address in the morning was followed by a great torchlight procession in his honor in the evening, with all the enthusiastic accompaniments for which German students are distinguished.——A CHANCE FOR INVENTORS.—A prize of $10,000 is offered by the French Government, to any person who between July 1, 1882, and July 1, 1887, will have invented the most useful application of the Volta pile.——Dr. W. B. Carpenter, F. R. S., is announced to deliver the next Lowell lectures at Boston, U. S. A. ——Cholera is reported to have broken out in Japan and in the islands forming the Soolo Archipelago.——DR. RIPTON.—We have received from a correspondent in Alexandria a short note concerning the late Dr. Ripton, whose massacre in Alexandria was recently reported. The deceased gentleman was an Irishman, the son of the late Dr. Ripton, of Dublin, who, besides practicing medically to some extent, preached among the natives. He was a man of quiet and amiable disposition, but had excited some ill feeling among the Arabs, so that about the beginning of last winter he fell into the hands of Egyptian soldiers, who maltreated him while he was taking a morning walk near the ramparts. Being in the habit of preaching to the natives, he was no doubt a marked man. Our correspondent at Cairo, who has passed a large part of his life in the country, writes that it is quite well understood here that the massacre had a politico-fanatical origin. He adds: "Had Admiral Seymour landed his men at Alexandria when he was urged to do so, we should have had a terrible massacre at Cairo, as the preachers of the Holy War, Nedim and his companions, after lighting the spark at Alexandria, came up here.—*Ex.* ——A society has been formed in Austria, called the Society of the White Cross, to aid in the labors of the Red Cross Society by providing and superintending convalescing homes in healthy places for invalids and wounded soldiers.——NEW CEREBRAL ANATOMY.—The Chicago *Medical Review* has discovered that Kant had a frontal suture in his brain. This was somewhat of a reflection on Kant, but it is still more of a reflection on the medical instructors of the editor of the *Review*, since they did not teach him to distinguish between brain and skull.——AMERICAN NEUROLOGICAL ASSOCIATION.—The eighth annual meeting of this association was held in the hall of the Academy of Medicine, 12 West Thirty-first street, New York, on June 21st, 22d, and 23d. There were afternoon and evening sessions. These were well attended by the profession, and the papers read were of the usual interesting character. A reception given to the association by its President, Dr. William A. Hammond, on Thursday evening. —— REMOVAL OF PLASTER-OF-PARIS BANDAGES.—Dr. F. H. Murdock, of Bradford, Pa., says: A very convenient way to remove a plaster-of-Paris bandage is as follows: Take a strong solution of nitric-acid, and by means of a camel's hair pencil paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster that it may be readily dividedby means of an ordinary jack-knife.—*The Med. Record.* ——PHARMACY IN IOWA.—Under the new pharmacy law of Iowa the pharmacists are required to give a bond of $3,000. The bond must be signed by two persons worth in real estate, over all encumbrances $6,000.—— The vacancy created by the resignation of Professor Langenbeck from the chair of surgery, and as director of the surgical clinic at the University in Berlin, will probably be filled by the appointment of Professor Volkmann, of Halle. He is, at least, the only one who will be nominated for this important position by the Medical Faculty of the University. Professor Volkmann has especially become known by his "Sammlung Klinischer Vortrage" (collection of clinical lectures,) which have found many readers also on this side of the Atlantic.——PRIZE OF THE ACADEMIE DE MEDECINE AWARDED TO DR. H. J. BIGELOW.—The prize of 10,000 francs founded by the Marquis d' Argenteuil, granted every six years to the author publishing the most important advance in urinary surgery, has been divided between Dr. Henry J. Bigelow, for his work on The Treatment of Strictures of the Urethra by dilatation urodyname, and Dr. Th. Anger, for his essays on New Thermo-Cautery, Lithotomy Instruments, and Peno-scrotal Hypospadias. Dr. Bigelow receives 6000 francs and Dr. Anger 4000 francs.——THE ROYAL COLLEGE OF PHYSICIANS ON MEDICAL ADVERTISING.—The Fellows of the Royal College of Physicians of London met in solemn conclave last week to consider a resolution condemning advertisements of medical books in the lay press, and the giving of medical testimonials to the proprietors of mineral waters, medicinal preparations, etc. An animated discussion ensued, and ultimately the following resolution was passed: "That the system of extensively advertising medical works, and the custom of giving laudatory certificates of medicinal and other preparations and medical and surgical appliances, whether for publication or not, is misleading to the public, derogatory to the dignity of the profession, and contrary to the traditions and resolutions of the Royal College of Physicians." It was pointed out that extensive advertising in the medical press was deceptive, as tending to associate special names with particular diseases. An interesting feature of the debate was the confession by a distinguished physician that he received five guineas for a certificate praising a "favorite natural aperient." We now know the value of the much-advertised recommendations of this water.—— BOYLSTON PRIZE ESSAY.——One of the Boylston prizes awarded by the Harvard University has again gone to England. Mr. T. M. Dolan, Halifax, Yorkshire, has won the prize of 300 dollars (£ 61 5s. 9d.) for an essay on Sewer-gas, its Pathological and Physiological Effects on Animals and Plants.——The French Society for the Protection of Animals has protested against the cruelties practised in connection with the mode of providing frogs for the dinner-table in France. It appears that when caught the poor animals have the upper part of their legs—i. e., the edible portion—ruthlessly cut off with shears, the remainder of their bodies being carelessly thrown aside as useless. They are stated to have been found in their mutilated condition, several days afterwards crawling about on their fore-legs. It is time vivisection of this kind, merely to satisfy the appetite of gourmands, should be interdicted.——Dr. Robert Koch, accompanied by Dr. Struck, the Director of the Imperial Board of Health at Berlin, had an audience of the Emperor on June 5, when he explained to his Imperial Majestẏ the results of his investigations on tubercle, and demonstrated his preparation containing the bacillus of that disease.——FEMALE NURSES FOR EGYPT.—According to latest intelligence, the number of female nurses that are to be sent to Egypt is 24. They have been selected from army nurses and members of the Narional Aid Society, all previously trained at Netley, and from Miss Nightingale's training school, and will all be subjected to uniform discipline as regular army nurses. They will leave in the *Carthage*, and will be sent to Gozo, Cyprus and Ismaila, some remaining for service in the hospital ship. The Army Medical Department speak, we are assured, in the highest terms of these ladies, who are nurses of great skill and experience in the care of medical and surgical cases.——M. PASTEUR.—At the last meeting of the Academy of Sciences of Paris, the President, M. Jamin, announced that a committee had been formed some time before to present the eminent chemist and biologist Pasteur with a medal commemorative of his great discoveries in those sciences. On the committee were the names of Dumas, Tisserand, Davaine, and many others well known in scientific and social circles. After an able and eloquent *resume* of Pasteur's special labors,t he medal was handed to that distinguished *savant* by his old friend and master, Professor Dumas.——CREMATION OF ANATOMICAL SUBJECTS.—The Municipality of Paris has just decided, on the advice of Dr. Bourneville, to sanction the cremation of those bodies which have served the purposes of subjects at the School of Practical Anatomy and at Clamart. The total number of such subjects received during the three years ending 1880 at both the above institutions, amounted to 10,144.——Dr. David W. Cheever has been nominated to the Professorship of Surgery in the Harvard Medical School, rendered vacant by the resignation of Dr. Henry J. Bigelow.——A CONGRESS OF CREMATION SOCIETIES.—A congress of the cremation societies of Italy will be held in Modena next September. The invitation has been issued by the Society of Milan, with the object of uniting the various Italian societies, and thereby forming, if possible, a "Cremation League."——Prof. William H. Pancoast has had executed a bust of his father, the late Prof. Joseph Pancoast, for presentation to the Jefferson Medical College.——JOURNAL OF CUTANEOUS AND VENEREAL DISEASES.—In October, William Wood & Co., of New York, will begin the publication of a journal devoted to cutaneous and venereal diseases, under the editorship of Dr. Henry G. Piffard, Professor of Dermatology of the New York Post-graduate School, and Dr. Prince A. Morrow. Dr. Piffard has long been recognized as a leading worker and authority in this department of medicine, and his able colleague will also add much to insure the success of this valuable undertaking. ——Dr. Robert Koch had an audience with his Imperial Majesty, the German Emperor, June the fifth, at which time he explained the results of his investigations on tubercle, and demonstrated his specimens containing the bacilli of that disease. ——THE MEDICAL CHRONICLE.—The first number of the *Medical Chronicle*, edited by Dr. George H. Rohe, of Baltimore, Maryland, made its appearance last month, filled with interesting and instructive articles. Dr. Rohe, who is already well known throughout this country as a literary and scientific worker, will, no doubt, make this journal one of the leading and most attractive in the medical profession. The *Chronicle* is issued from 95 Park avenue, Baltimore, Md., at one dollar a year.——THE CATTLE PLAGUE.—An alarming plague among cattle has appeared recently in Pennsylvania, Virginia, West Virginia, North Carolina, and Alabama. At the Agricultural Department the disease is supposed to be splenic fever, or Texas fever, as it is popularly known. Dr. Salmon, one of the department inspectors, pronounces the West Virginia outbreak a virulent form of this disease, and it is probable that the others are like it.

Dr. Dutrieux, the Belgian explorer, who was residing at Alexandria at the time of the bombardment, and during that trying period, when half the city was in flames, calmly pursued his work in the Egyptian Government Hospital, has been rewarded by the Khedive with the title of Bey, and the appointment of Physician-in-Chief to the Hospital. Dr. Dutrieux, in a letter dated July 20th, says: "I have escaped the massacres perpetrated by the criminals and Bedouins let loose by Arabi Pasha against a defenceless population. My house has been burnt and pillaged. As medical officer of the Government Hospital and of the European Hospital, my professional duties detained me in Alexandria, which I have not quitted for a single minute."——The Professorship of Surgery in Berlin, recently vacated by the resignation of Von Langenbeck, has been filled by the appointment of Professor von Bergmann.——According to a recent report to the Sanitary Committee of Massachusetts, it appears that of 2,701 pigs examined during five months, no less than 154, or nearly 6 per cent, contained trichinæ. The animals came from different and distant regions, but the majority were from the Western States. The same report affirms that rats are affected with trichinosis at Boston to a much larger extent than in Germany. Of fifty-one rats, caught in a Boston slaughter house thirty presented trichinæ. On the other hand, twenty-eight fowls fed in the establishment were found to be healthy. Forty rats taken in another large slaughter house all contained trichinæ, but of sixty found in different stables, only six were thus affected. In France little consideration has, until lately been given to the danger of trichinæ in imported pork. At Lyons however, inspection has been commenced, and has quickly borne fruit. An enormous consignment of lard, amounting, it is said, to 120 tons, was lately received at Lyons from New York. Of fifty specimens examined immediately after arrival three were found to be infested with trichinæ. At Barcelona six cases of death from trichinosis have occurred in three months.——A MAN WHO HAS WALKED 175,200 MILES.—George Fawcett completed, in April last, his forty-seventh year of service in the English Post Office as a rural messenger. From 1835 to 1842 he rode between Sedbergh and adjacent stations, carrying mails in this way a total distance of 67,160 miles. From 1842 to 1882 he was walked daily between Sedbergh and Dent, thus traversing 175,200 miles. His entire travel as postman foots up 242,360 miles, nearly ten times the distance round the earth, and 2,360 miles further than from the earth to the moon.——The British Troops, says the Egyptian correspondent of the London *Times*, will have to encounter "the endemic hæmaturia." "It is caused by a parasite, supposed to find its way into the human body by the intermediary of small fresh-water mollusks, with which many of the canals abound." Its devastations are so serious that "last year about a dozen of the staff of the Eastern Telegraph Company at Suez were invalided within a month or two from the disease." "About three-fourths of the fellaheen population suffer from the scourge; it is often fatal; it generally leaves permanent mischief, and it is always of long duration." It is a disease "which might decimate the army with permanent invalids after their return from Egypt, as only in a few cases, when the disease has been severe, is there a complete cure."——ANNUAL REPORT OF THE OPERATIONS OF THE UNITED STATES LIFE SAVING SERVICE FOR 1881. WASHINGTON: GOVERMENT PRINTING OFFICE.—One hundred and eighty-three stations were maintained, 143 on the Atlantic coast, 34 on the Lakes, and 6 on the Pacific. There were within the scope of the operations of the service during the year 250 disasters to vessels, carrying 1,878 persons, of whom 1,854 were saved. Sixteen other persons not in vessels were saved from drowning. Threatened disaster to 188 vessels, stranded or otherwise imperiled, was averted by the service. Sixty-six vessels were a total loss, Property to the value of nearly three million dollars was saved by the service.——YELLOW FEVER increases in malignancy and fatality at Brownsville, Texas. It has appeared at Pensacola, Fla., and the disease is slowly extending. The cities in communication with these infected centres have quarantined against them.——Guiteau's skeleton is now in the National Museum. The microscopic experts differ as to his brain. There are to be *two* reports ! ! ! Is there to be no end of this Washington nuisance ?——ANNIVERSARIES.—April 24th, Professor Henle, the celebrated anatomist in Gottingen, cele. brated his 50th anniversary as physician. Many eminent persons were present. Nearly all the Universities of Germany sent congratulations to this rare festival.——April 18th, Prof. von Arlt, the well-known ophthalmologist in Vienna, celebrated his 70th birthday.——Japan has now six medical journals published in the native language.——PROF. BALFOUR, OF CAMBRIDGE, ENG.—By an unfortunate accident in the Alps this distinguished investigator has lost his life, and the University, which had so recently established for him a Chair of Morphology mourns over an unusually brilliant son. Though a very young man, Mr. Balfour had done exceptionally good work, and his two volumes of Comparative Embryology will secure him a lasting reputation.——Dr. Marion Sims has returned from Paris. after a pleasant and profitable visit, completely restored to health. The French Government has recently made him "Officer of the Legion of Honor." It will be remembered that for services rendered as Surgeon-in-Chief of the Anglo-American Ambulance at the Battle of Sedan he was made a *Chevalier* of the Legion of Honor in 1864. The title now conferred is a much higher one. It gratifies alike the personal friends of Dr. Sims and all American physicians who recognize his genius, and are pleased to see him publicly honored.——The Sultan of Turkey has given a site in Jerusalem for the purpose of erecting a hospice and ophthalmic dispensary, under the auspices of the English branch of the Order of St. John.——On the 1st inst. a meeting was held in Queen-square, Bristol, England, to promote a movement for the erection of an international hospital at Washington in memory of the late President Garfield.——The Philadelphia County Medical Society lectures for 1882–83 will be delivered by Prof. Austin Flint, Senior, of New York, who will discuss practical points connected with the physical diagnosis of visceral lesions.

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EDITORIAL.

MEDICAL MEN IN ENGLISH SOCIETY—According to a recent English fashion journal the status of the English medical man in society is rising. While formerly the medical man, as such, was regarded as a species of upper servant he now has taken the position occupied at one time by the curate. The latter was in great demand as a species of filler up of vacant places in parties, but the tendency to discuss scientific topics in social gatherings, drove him from the field, leaving it open to the medical man. The latter is just now the pet of English society, as constituted by mammas and the daughters not yet settled matrimonially. He furnishes the latest gossip about. Huxley, Tyndal, Darwin and Lubbock. His opinion is used to drive pater familias into taking the family to the continent or to a watering place. The average physician must, therefore, not be too orthodox in his theological views, nor yet too radical. He must not have published anything too profound lest society regard him as bore; a few light articles in journals suffice to keep up his reputation among his female worshipers. Despite all this Milner Fothergill is justified in his opinion, that there is a great deal of snobbery in the average English medical man; the position just described is one evidently precarious, due rather to the absence than the presence of any established social status. That there is a good deal of snobbery in the English medical profession is shown in the recent complaint of the *Medical Press and Circular*, that not a single one of the nine baronetcies recently created was given to a medical man. A medical journal in a country where the highest official, not royal, deems it right to remain without a title, where the greatest statesman have deemed it an honor to die untitled, complaining because a manufacturer of manure was given a baronetcy, and the medical profession was not recognized, certainly gives a very low idea of the aspirations of the English profession. That a leading journal should complain because the profession is not honored by the receipt of a title the most easily obtained and most worthless of all English titles, is certainly snobbish. The status of the English medical man socially is inferior to that of the American physician. The latter may shine in society, though he spell emulsion "amulshion" while the former in condemned to the former position of the curate, half butt half pet.

Regulating Venereal Diseases by Law.—The suppression or diminution of venereal diseases is one of the most difficult problems of state medicine. The efforts hitherto made have required a quasi-recognition of prostitution as a legal occupation, and this has tended to rouse opposition from those who believe that vice should not under any circumstances receive legal recognition. The attempts heretofore made have failed because of strong opposition on the part of the respectable portion of the community, and equally powerful through covert resistance on the part of those assailed. A proposed law recently drawn up by the American Public Health Association seems to have met all indications better than anything which has yet been suggested. The following are the two sections specially of value: "That any person within the jurisdiction of the State [or Territory], who shall knowingly communicate, or be instrumental in communicating, directly or indirectly, any contagious disease, such as small pox, scarlet fever, or venereal disease, shall be guilty of a misdemeanor, and subject upon conviction in any court having cognizance of misdemeanor [where the offence may have been committed] [in the State or Territory], to the punishment of six months' imprisonment in the [County Jail]. That if any person being the owner, agent, or occupant of any house, room or place within the jurisdiction of this State [or Territory], shall have reasonable cause to believe any person located permanently or temporarily therein to be affected with a contagious disease, and shall fail to make such fact known to the proper health authorities [or if there be no such officials, to the nearest magistrate having jurisdiction of misdemeanor], he or she shall be deemed guilty of a misdemeanor, and upon conviction in any court having jurisdiction of misdemeanors [where the offender may reside or the offence have been committed], shall be liable to a penalty not exceeding [five hundred] dollars or to imprisonment not exceeding six months, or to both." The especial value of this law lies in its appeal to personal interest for its enforcement. Any one contracting venereal disease from another person feels indignant and revengeful, and provided the means exist, without too much publicity, of revenging himself by means of law, he will be very apt to render the assistance in enforcing the law. It is a matter of common observation that laws which directly benefit the individual are apt to be carefully enforced, while laws whose action is indirect are neglected. This is one of the former class of laws. There is no especial need for publicity as regards venereal diseases. The police are accustomed to deal summarily with the class among whom such diseases are prevalent, and by police examinations sufficient evidence could be found to convict the accused person without bringing the informant's name before the public. Owners of houses have so often offended former tenants that the latter will be sure to avail themselves of any opportunity for revenge and thus for their own protection the landlords will have to keep a close watch over their tenants. The proposed law, for these reasons, is one which should receive attention at the hands of the various State Legislatures.

DR. J. S. WALLACE.—The attention of the reader is particularly called to the advertisement of Dr. Wallace in this number. He offers a very fine property at a very low price.

THE LAST OF GUITEAU.—This review, from *The Canada Medical Record*, is so just that it is published with pleasure. It is a thorough endorsement of the views so frequently expressed by this Journal.

E. S. G.

At last the solemn farce is over; the assassin of President Garfield has paid the penalty of his crime on the scaffold. The exalted position and noble character of the victim and the peculiarly distressing circumstances of the murder have combined to excite the interest and call forth the sympathies of the civilized world ; while the popular craving for the sensational, and the readiness of the daily press to pander to this depraved taste, have enabled Guiteau to absorb a far larger share of public attention than he really deserved. From a medical point of view the case presents many features of interest; but some time must elapse before the numerous conflicting theories of to-day are harmonized, and the points at issue definitely settled. Meanwhile, it is to be feared that the general reputation of the medical profession has not been improved by the conduct of some of its members who figured prominently in the case. The unfortunate conflicts of opinion and unseemly squabbles between medical men during the illness of the President and the trial of his assassin, have not only tended to demonstrate to the general public how widely different are the views of representative men upon the most important questions, but have also laid bare an amount of discourtesy, petty jealousy and professional rivalry which is highly discreditable to our profession. While the President lingered through those memorable twelve weeks of suffering, the profession was scandalized by the ignorance and assumption of such men as Dr. Bliss; the conduct of the medical attendants was weak and vacillating; their official bulletins were meagre and misleading; their sayings and doings were daily criticised in the public prints by scores of *would-be* attendants, till at length public confidence was shaken, and general dissatisfaction expressed with the medical management of the case. After the President's death, even the autopsy was sadly bungled and the profession again publicly disgraced. Then came the memorable trial at Washington; Guiteau was arraigned, and the plea of insanity put forward in his defence. Forthwith crowds of experts flocked to Washington, and aired their respective hobbies, while the assassin was permitted to insult daily the judge, lawyers and witnesses, and amuse densely-packed audiences with his impudence and buffoonery. As an exhibition of forensic knowledge and ability, the trial was equally discreditable to the professions of law and medicine; it took them eight months to decide that Guiteau knew what he was doing when he shot the President, that he knew his act to be wrong because contrary to the law of the land, and that, consequently, he was sane and responsible when he committed the murder. The usual appeals and petitions having failed to secure a reprieve, the death sentence was carried out on 30th June, almost a year after the perpetration of the crime. And now we are called upon to witness a disgraceful squabble among the medical men who were entrusted with the *post-mortem* examination of the assassin. Charges and counter-charges, threats and recriminations, published in the columns of the daily press, make a discreditable ending to a most discreditable case.

Medical men in general, and psychologists in particular, are usually loud in their denunciations of the legal test of responsibility which at present obtains. They are tolerably unanimous in styling the "*right and wrong* test," as "a legal myth," a "relic of barbarism," etc.; but when called upon to suggest a better one, their unanimity ceases, and their theories and views are found to be as dissimilar as they are unpractical. The present case has not helped matters, each psychologist has arrived at a different diagnosis, and each appeals confidently to posterity to establish the correctness of his own particular theory. Law has not learned much from medicine during the progress of this trial; and, unfortunately, the public have been left with the impression that any rogue possessed of sufficient cunning and determination could, with little difficulty, convince insanity experts of his mental unsoundness and irresponsibility. "Quod volumus jubemus," seems to be the motto of many of these psychological gentlemen.

BRAINS AND SKULLS OF CRIMINALS.—There has been of late exhibited a curious tendency to make human beings mere automata and trace crime to a peculiar brain convolutional type. Benedikt of Vienna has led the way in this field of research, and his conclusions have been accepted by certain American authorities for what must seem very meagre reasons. That there should be criminals whose tendency to crime results from congenital deficiencies no medical sociologist will deny, but the conclusions of Benedikt would refer all crime to a physical basis and totally destroy all responsibility. Ferri, an Italian authority, classifies criminals as follows: Insane or semi-insane criminals; criminals born so; natural criminals from education; criminals from passions, and criminals on occasion. These divisions strike us as justifiable and more scientific than those resulting from the views of Benedikt. Among the latest researches on this subject are those of Hesch (*Centralblatt fur die Medicinischen Wissenschapten*, No. 11, 1882). He has found that the skulls of twenty-eight out of fifty assassins were asymmetrical, in twelve there were hyperostoces, and in three grave traumatisms. In a general way results confirm Benedikt but are not so absolute.

WOUNDS OF THE BLADDER.—Dr. E. Vincent (*Lyon Medicale*) has after numerous experiments on wounds of the bladder arrived at the following conclusions: Immediate suture of the bladder leads to union almost invariably even in gunshot wounds. Laparotomy and later suture often lead to union in the first ten hours. Laparotomy and vesical suture should be practiced as soon as possible when the bladder has been punctured and effusion of urine into the peritoneal cavity has occurred The sub pubic operation should not be practiced. After a second series of experiments he concludes that contact of urine with the peritoneum does not result in the fatality usually regarded as its natural consequence.

TYPHOID FEVER CONTAGION.—Tizzoni (*Annali Universali di Medicini e Chirurgia*) has recently studied typhoid fever communication, and after an extended series of experiments comes to the following conclusions: First. The insoluble organic matter obtained from potable water by simple filtration, during a typhoid epidemic, may produce the principal clinical and anatomical phenomena of typhoid fever if injected in distilled water beneath the skin of animals. Second. The anatomical lesions of this experimental typhoid are produced by the presence of micrococci. Third. In some cases slight symptoms only are obtained. Fourth. Typhoid infection may be transmitted from animal to animal by injection of blood. Fifth. Typhoid virus has an elective action on the intestinal tube even when injected hypodermically. Sixth. The soluble or unsoluble substances found in the air do not produce typhoid fever when injected subcutaneously. Seventh. Typhoid phenomena are absent when the injection produces local suppuration. Eighth. The infecting substances lose their infectives when kept two months in a closed vase, and when the micrococci in them are no longer active.

Lyssophobia and Tobacco.—A case is reported from Indiana in which a patient was bitten by a dog alleged to be hydrophobic. It is evident, however, that the dog was suffering from epilepsy due to heat, and that the patient suffered only from the result of an excited imagination, well called lyssophobia, or fear of rabies canina. Since his illness the man has developed a fondness for tobacco and, as might be expected, this exerts a soothing influence on his disease. The case is under the care of an irregular practitioner, and will doubtless be before long reported as a case of hydrophobia cured by tobacco.

Pathology of the Nails.—Dr. P. G. Unna, Hamburgh, Germany (*Vierteljahr Schrift fur Dermatologie und Syphilis*, January, 1882) has recently met with five examples of a morbid state of the nails. Essentially chronic in its evolution, susceptible of variations and even of spontaneous disappearance, the disease presents three degrees of intensity. At first it is characterized by the development on the middle part of the nail of one or, more rarely, two longitudinal crests, which raise the horny substance out, and seem nothing else but an exaggeration of the normal imprints in the bed of the nail. In the second degree the elevation is increased, the subjacent skin becomes reddened and painful on pressure, and the nail undergoes a pronounced thinning. In the third degree the thinning leads in neighboring parts of the free border to complete destruction of the nail and to the production of a gap of variable extent. The two lateral parts become independent of each other, and in consequence of the loss of substance cease to be parallel and converge toward each other in front. The anatomical causes of this condition are unknown, but Unna believes that it is due to a venous stasis in the capillary web of the nail matrix. It is closely allied to the condition reported by Gosselin as occurring to adolescents. Unna bases his idea as to the pathology of the disease on the existence of circulatory affections in the majority of his patients. The first was emphysematous and had chronic bronchitis and hæmorrhoids. The fourth suffered from chronic gastritis. The third and second presented symptoms of asphyxia of the extremities. The fifth alone exhibited no other morbid symptom.

Ether Paralyses.—Dr. Arnozan Journal de Medicine de Bordeaux, (June 25 1882), has recently examined the paralyses produced by hypodermic injections of ether and has arrived at the following conclusions First: The injection of ether into the muscles produces paralysis of these muscles. Second: These paralyses offer very great analogies, to the peripheral paralyses. There is suppression or diminution of the faradic excitability ; increase of the galvanic excitability and return of voluntary motion *pari passu* with the faradic excitability.—Third: These paralyses may recover spontaneously but then with great slowness. Their recovery under galvanism is much more rapid. Dr. Arnozan is inclined to believe that paralysis is due to the peripheral action of the ether.

Ætiology of Lupus Vulgaris.—Randreitz (*Viertel jahrschrift fur Dermotologie und Syphilis* 1882 p. 31) in an interesting article, on two hundred and nine cases observed by him at the clinic of Fick, Germany, has studied in detail all the facts to which have been assigned an ætiological influence on this affection. As to sex seventy-eight of his patients were males; one hundred and thirty-one females. Age. The disease was most frequent between ten and fifteen; there were forty-six cases, of which sixteen were boys,and thirtygirls. The next most frequent period was between five and ten ; there were twenty boys and two girls attacked at those ages. The disease was located in thirty eight cases on the nose and in the adjacent region ; on the cheeks in twenty-seven cases, and in forty cases on the trunk and extremities, of which sixteen cases were lupus of the hand and twelve of the foot. In sixty-three cases scrofula was present, in eighty-one cases there was not the slightest evidence of its existence. The disease often makes its appearance on the seat of scrofulous glandular scars. Twenty-one cases had a hereditary tubercular history, two only however were actually tuberculous. In twelve cases lupus originated in traumatism. Dr. Randrietz is inclined to believe that tuberculosis does not exert the influence which is claimed for it in lupus.

Was the New York Code Necessary? It is claimed by the adherents of the New York code that its enactment was rendered necessary by the action of the New York State Homœopathic Society abandoning its name and its principles and becoming simply a medical society. There is a clause in the American code which prohibits consultation with practitioners of an exclusive system. Anything not prohibited in that code is regarded as permitted. If, therefore, the State Homœopathic Society abandoned its distinctive name and no longer claimed to practice an exclusive system, its members might consult with regular physicians without causing the latter to violate the American code. Judged from this standpoint, the New York code was at best unnecessary. The homœopathists having ceased to claim an exclusive designation, consultation with them was not prohibited by the National code of ethics. It may be claimed that since the homœopathists are graduates of homœopathic colleges, that, therefore, the National code prohibited consultation wifh them. Judicial decision in New York has, however, settled this question. Two years before the adoption of the New York code a female graduate of a homœopathic college compelled, by due process of law, the New York County Society to admit her as a member, since she proposed to practice medicine and not homœopathy. Under such a decision any one who claimed to practice medicine and was legally qualified so to do, could compel any regular medical society to admit him to membership. The law, therefore, held that graduation from an irregular college did not constitute any one an irregular practitioner of medicine; it was the way in which such physician claimed to practice. The New York code was therefore unnecessary ; for all legally qualified irregular practitioners who desired to become physicians and not members of a medical sect sufficient provision already existed in the old code, and between the irregular practitioners who were fanatics and the physician there was no possibility of agreement. The New York Medical Society certainly did not have a very clear idea of what it intended to do by its code, unless, as seems probable, it intended to advertise a few specialists as "go-as-you-please" practitioners.

Did Henry VIII have Syphilis?—Dr. William Sykes, Mexborough, Yorkshire, England (British *Medical Journal*, July 29, 1882), claims that Henry VIII had syphilis, and that had he been treated with a few grains of blue pill, the Reformation in England would not have occurred, and many events equally important in history would have been prevented. The ground on which Dr. Sykes bases his opinions are, First. In 1537 Henry is described as having an inveterate ulcer on his legs. This, according to Dr. Sykes, in a man of fifty, fairly temperate and with no history of violence, suggests syphilis. It may do so to Dr. Sykes, but he seems to forget the inveterate nature of the non-luetic varicose ulcers, which in 1537 were not so well understood as at present. Second—Henry lost his hair early, unlike his ancestors ; a suggestion according to Dr. Sykes of syphilis, but men of lascivious habits like Henry often lose their hair without having had syphilis. Third—Nearly all Henry's children were still-born or died soon after birth. Catharine of Aragon had a miscarriage in 1510. A child born of her in 1511 died a month after birth. In 1513 a second child died immediately after birth. In 1514 Catharine miscarried again; again in 1515 and once more in 1518. Were Catharine of Aragon of perfectly healthy stock this might be pretty strong evidence, but she came from a family rank with degeneracy from inter-marriages. She had one living child, Mary, whose health was poor. Anne Boleyn miscarried once; some authorities claim from a powerful moral cause, but she had a typically healthy child. Elizabeth Edward had tuberculosis, but this was already existent in the Tudors, and the Seymours. It must be clear that to prove Henry syphilitic, the ulcers must be shown not to have been of varicose origin, and that his alopecia could not have been due to excessive venery alone. It must also be shown that Catharine's ancestry did not have an influence in producing the abortions and premature deaths. It must also be proven that Anne Boleyn's miscarriage did not result from a moral cause. The contrast between her child Elizabeth and Catharine's child Mary seems to indicate that the mother was all important in shaping the health of the child. Dr. Sykes has raised a question of interest. His conclusion, however, does not certainly follow from his premises.

THE "BRIEF" JOURNALS.—In the past few years, there has appeared a number of medical journals, whose avowed and only claim to support is that all the articles contained in them shall be "brief," and so "brief" as to give name and character to these publications; this brevity, too, is not to be the characteristic of the selected matter, only, but original contributors, it is asserted, must be limited, in their communications, to 300 or 400 or, at most, 600 words.

A few remarks on this recent phenomenon in medical literature will, it is hoped, be taken in the spirit with which they are given; simply as a critical study of the phase of medical opinion which prompts and supports this curious species of medical literature.

The avowal is first distinctly made that these remarks are not presented in regard to any one of these journals, or their editors, so no one can fairly or justly make a personal application of remarks which are general in their nature and design.

If any one were called upon to say what the Profession would always demand in regard to every paper offered for publication, he would say that in all "cases" there should be a full and intelligible presentation of the history, cause, nature, symptoms, treatment and results; or if there be no "case" presented, the subject of the paper, whether medical or surgical in character, should be presented either in the manner indicated, or in some order which should include a study of each and all of these classic and necessary sub-divisions of every medical paper.

Certainly, if the opinion and example of the great writers of the profession are to constitute a guide, there can be but one opinion in regard to this matter. If any one had requested such masters as Trousseau or Velpeau, Virchow or Niemeyer, Sir Thomas Watson or Sir James Syme, Gross or Flint, to write an article on any disease, or report any case carefully, in six hundred words, the author of the request, if not regarded as an idiot, would certainly have received a smile of derision for his answer. Such men require a chapter at least, often two, in which to perform such a task. And yet there are thousands of physicians who, all unused to such efforts, are foolishly asked to attempt such an impossibility. Scores, yes, hundreds, are foolish enough to attempt it. What is the value of such efforts? What must be their value, and the value of the publications which contain them?

Physicians are ludicrously told, in such journals, that "the busy practitioner has not time for reading long-winded articles ;" such articles as are given by classic writers to the old and classic journals of Europe and America ; that they must get "the pith of the subject" in a few lines or words, contributed by those not known out of their precincts; those who are foolish enough to make such an exposure of their folly and ignorance.

Marvellous to say, there are thousands of physicians (at least in name) who believe that they are too busy to learn ; too busy to study, and too busy to be taught by those who can teach them. They prefer to have their vanity so flattered, as to believe that they are very busy; and they prefer, thus, to read the worthless efforts of unknown men; to have such become their teachers and advisers. It is marvellous, indeed.

Most would say that such a result, such a spectacle, would be impossible ; and yet, if these "brief" medical journals are to be credited, their subscribers are numbered by the five thousand, and even more.

If one were to behold a friend attempting to learn history by studying the chronological table, he would justly fear that his friend was perpetrating a silly joke, or that his brain had begun to fail ; and yet how infinitely more sensible would be such a student than the scores, the thousands of medical men who, in the reading of these "brief" journals, are endeavoring to learn pathology, clinical history and therapeutics in the myriads of silly articles presented by weak men in 400 or 600 words !!

Burdon Sanderson, Koch, Barnes, Jaccoud, Sir William Jenner, and scores of others equally able have an exhausting private practice ; they have laborious clientelles at great hospitals; they teach in colleges; they make elaborate series of experiments, physiological and pathological in character; they write long and able articles for the journals ; they publish medical works that are classic in diction, monumental in volume and value, that are vast store houses of original facts gathered in the intervals between exhausting duties; but in addition these men are close students of the great medical journals of many languages. "The busy practitioner" of a few new cases daily is told by these little "brief" journals that he has not time for reading "long-winded articles" from great men ; that he must read miniature efforts from small men; and, marvellous to relate, stupendous as is such folly, the silly statement is believed; and men who by study might become useful to the profession at large, and prominent in their country, are frittering away existence either in idleness, or by poring over the veriest trash.

Such men, and the greater multitude who read no Journals whatever, have no conception of the fact that in their implied contract with their employers, to render the best service when employed, they have betrayed, are daily betraying, the most solemn of all the obligations which rest upon physicians —that of preparing themselves to discharge honestly the duties which they assume at the bedside.

It is said of that noble Spartan, Dr. George B. Winston, of Kentucky, who recently died in Jefferson City, Missouri, that he was once thus addressed by a friend: "Doctor, what necessity is there for this ceaseless labor and study ?" With a look of astonishment, he replied: "My dear sir, I am under bonds to do it. When I offered my professional services to this community, there was an implied covenant on my part that, so far as God gave me strength and ability, I would use these for gathering up and digesting all that is said or written of the diseases to which human flesh is heir ; and if I should lose a patient because of my ignorance of the latest and best experience of others, in the treatment of a case, a just God would hold me responsible, through inexcusable ignorance, for the loss of a precious human life, and punish me accordingly. And when I get my consent to be content with present professional attainments, and trust to my own personal experience for success, I will withdraw from practice, and step from under a weight of honorable obligations, which, with my best endeavors to meet them honestly and conscientiously, are still sometimes heavier than I can bear."

To those who study much these noble words are commended for the support they must bring. To those who study not at all, they are equally commended for the sterling advice and timely rebuke which they contain.

But above all, they are commended to those who are trifling with themselves, with their Profession, and with their employers by vaporing over the superficial trash published in those "brief" Journals, which in their teachings and their practice, are striking a fatal blow at all that is genuine and sterling and thorough in the study of contemporaneous medical literature.

But apart from all of these potent, and just objections to such publications, they must certainly give to every reader a most injurious conception of the scope, triumphs and achievements of a noble Profession and its splendid literature, to have it supposed that these can be presented, by a little magazine issuing 20 or 30 pages monthly. Of course those of matured minds would realize and do realize very promptly the absurd claim made by the "brief" Journals; but unfortunately, these are not the subscribers to such medical publications: those who do subscribe for them are the young and the immature, those who do not know better, and who really believe that, in these miniature periodicals, they are actually obtaining in "brief" an exhibit of the grand monthly operations of the Medical World.

There are besides such subscribers, many who are too lazy or too indifferent to study the truth, as it is fully presented in the large Journals of Europe and America; and who are foolish enough or willing enough to believe that in the little articles of contributors unknown to science, and in a host of miscellaneous recipes from prescription worshippers, they are obtaining the grand monthly harvest from the magnificent field of medical literature.

Such conceptions, and such an indulgence of them must hopelessly dwarf the mental character and professional efficiency of all who make such fatal and fearful errors. And this, in turn, must react upon all who thus trifle with themselves and the great Profession of which they are members. It must make them worthless in their work; worthless to their employers; and, instead of being contributors to the growth of a noble Professional Body, they become so many parasites, destroying its vitality and bringing upon it unjust ridicule and serious injury.

These manifest truths are offered in no unkindly spirit, but as worthy of serious reflection.

The *New York Medical Journal* says, respecting the position of its State society: "It is better that the State of New York should stand aloof from the American Medical Association forever than retreat from the just stand it has made, or falter in the demolition of the mediæval thralldom in which the old code so lately shrouded it." Brave words in view of the fact that of the twenty-eight county societies of New York which have thus far expressed any opinion on this matter but two societies have endorsed the action of the State Society. Twenty-six have directly repudiated the new code.

CHEAP MEDICAL BOOKS.—Sir H. Thompson has set a good example in issuing a cheap edition of his lectures on urinary disorders, and one worthy of imitation. Beyond doubt it is proving highly remunerative. If authors would bring out their works in a cheap form they would soon find their productions give them better pecuniary results, and their publishers would not be hampered by having their shelves burdened with slow-selling or unsold editions, which ought to be lying on the shelves of professional private libraries. There are hundreds of works unread which those who do not belong to a Medical Society library never can peruse because they cannot afford to purchase them. Publishers should use fair paper and paper covers; purchasers can then have all books bound in a uniform manner.

GAILLARD'S MEDICAL JOURNAL.

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ORIGINAL ARTICLES.

"Qui Docet Discit."

ADDRESS IN SURGERY. By WILLIAM STOKES, F.R.C.S.I., Professor of Surgery, Royal College of Surgeons, Ireland; President of the Pathological Society of Ireland. At the Semi-Centennial meeting of the British Medical Association at Worcester, Eng., August, 8th, 9th, 10th, and 11th, 1882. (*Brit. Med. Jour.*)

My first duty and real pleasure is to offer an expression of gratitude for the honor—the great honor—that has been conferred on me and on Irish Surgery in being asked by your Council to address you on an occasion so memorable as the present. Were I called on to address an audience previously unknown to me, though not insensible of its sympathy, my diffidence would be great. How much greater must it be when I know I am speaking to so many fellow-laborers whose work, life-object, and ambition are the same as mine, and many of whom have acquired and deserved far-reaching fame. However, if my diffidence is great, so is also the pleasure, as the honor of being invited to address you comes from the noblest brotherhood in a profession that has yet existed; for such—now celebrating its jubilee—is this Association, the interests and prosperity of which we all have so much at heart.

It must be a source of genuine satisfaction to those who for many years past have taken an active interest in the work of the Association to observe how, first taking root here in the heart of England, its branches now extend not only over the three divisions of the kingdom, but also stretch out widely and luxuriantly to our great colonies, east and far west—wherever, in truth, the flag of England is looked upon with affection and pride. Well has our great brotherhood fulfilled the expectations of its distinguished founder, Sir Charles Hastings; for, as it had its birth in the "faithful city," so it has proved faithful in many good and noble ways—faithful in removing professional jealousies, and softening asperities—faithful in protecting with its broad and strong shield those among us who may have been cruelly and unjustly attacked—faithful in its efforts to raise the social status of our profession—faithful in its attempts to extricate public opinion from the quagmires of sentimentalism and folly—faithful in aiding and encouraging the scientific vanguard of our profession.

But, great as have been the results of these efforts of the Association, much yet remains to be achieved. I should like to see loyal and hearty-co-operation with the universities, the medical and surgical corporations of the United Kingdom, and the General Medical Council, to raise the standard of Arts education for all joining our profession, by establishing conjointly an examination in Arts which every one, except those with university degrees, should pass previous to commencing the study of medicine. I should also like to see a consolidation of the great medical and surgical teaching power that exists in our metropolitan centres, but which, owing to the multiplicity of small schools in them, is, to a great extent, lost to the profession and to the Public. Instead of urging the establishment of additional schools, it would be far better to endeavor to bring about such an amalgamation as I have indicated, and co-operate with those who wisely think that among the chief desiderata in our profession is a larger amount of training in a university where the first phases in the life of a medical student can best be spent, viz.—first, the preliminary general, and second, the preliminary scientific education. I am strengthened in this conviction by the fact that during the Visitation of Examinations recently conducted for the General Medical Council, in which I had the honor of being associated, the Visitors frequently observed candidates for the diplomas of our corporations whose general and scientific culture was far below what any one joining our profession ought to have.

The portals of many of the universities have recently been widened, enabling those to avail themselves of the advantages, social as well as intellectual, which a university affords, who a few years since would have been wholly precluded from so doing. In giving these facilities, Oxford, where the natural sciences were too long proscribed and discouraged, is specially deserving of gratitude. Away from the turmoil and distractions of a great metropolis, the sciences auxiliary to, as well as those that are the basis or foundation of, medicine, such as human and comparative anatomy, physiology, chemistry, and histology, can best be studied, aided by all the collateral advantages and noble traditions of an historic university. Such training would assuredly give a healthy impulse and scientific direction to the practical work of a student when he leaves the university to complete his professional studies at a metropolitan school. The universities, especially those in or near the smaller provincial towns, are quite unsuitable for complete practical schools of medicine and surgery, the available material being—having regard to existing modern requirements, and especially as regards pathology—necessarily inadequate.

Having for several years been a surgical examiner in the Queen's University in Ireland, I was forcibly impressed with the truth of the view that, for the practical teaching of surgery and pathology, universities in the smaller provincial centres, are hardly able to afford adequate material for the student to acquire a sufficient knowledge of these subjects. The function of universities, at least those so situated, in relation to medical education especially, should be that of great scientific schools, and not centres for practical clinical study. I feel confident the day will come, when the wise and far-reaching policy of those who have held and maintained such views will be recognized, and acknowledged to be correct.

I am strengthened in these views from the knowledge that they largely coincide with those of one long and intimately associated with the cause of medical education in this country—I allude to the distinguished Regius Professor of Medicine at Oxford and President of the General Medical Council, whose great and unselfish devotion to the best and highest interests of our profession must ever command our unqualified admiration and respect.

It has hitherto been customary for my predecessors at the annual meetings of the Association, either to give a *résumé* of the most recent advances in surgery, and discuss some particular theory or mode of practice on which surgical opinion is more or less unsettled, or dwell on those topics that have proved of special interest to himself. On the present occasion, one which should be marked *meliore lapillo*, to give a detailed retrospect of surgical advancement during the past half century would be a task not alone difficult, but, in truth, impossible in the time at my disposal. I purpose, therefore, to dwell on some few topics of great general interest, involving questions still unsettled, and which have more particularly engaged my attention.

However, though a detailed retrospect of the surgery of the past half century is here impossible, let us, like travelers who enjoy the happy toil of climbing an Alpine steep, and who at times pause to look back and take a panoramic survey of the country traversed, see the giddy heights that have been scaled and the difficulties overcome, contemplate the chief advances in our art, the obstacles and opposition that have been swept away, and the breaking of the fetters that so long bound it to a blind empiricism. What have been these advances? The list is a goodly one, and the mere enumeration of them would alone occupy the hour at my disposal, but I may mention a few of those that stand out most boldly in relief: The abandonment of an indiscriminate blood-letting in almost every form of acute surgical disease, of a reckless use of mercury in the treatment of syphilis, and of setons and moxæ in hopelessly irremediable articular and other diseases; the introduction of the pressure treatment of aneurism by Bellingham, Todd, and Hutton; of drainage in the treatment of wounds and abscesses by Chassaignac; of metallic sutures and the perfecting of the operations of vesico-vaginal fistula by Marion Sims; of lithotrity by Civiale, Thompson and Bigelow, and of stricture by Syme, Wheelhouse, Maisonneuve, Perréve and Holt; the *renaissance* of joint resection by Crampton, Syme and Ferguson; the introduction and establishment on a firm basis of ovariotomy by McDowell, Clay, Spencer Wells, and Keith; of bloodless surgery by Esmarch; of skin grafting and sponge grafting by Reverdin and Hamilton; and of osteotomy in genu valgum by Ogston; improvements in methods of amputation by Bell, Teale, Carden, Syme, and many others; also the operations of gastrostomy, excision of the pylorus, of the spleen, the kidney, supra-pubic excision of the uterus, laparotomy, and cholecystotomy. In connection with abdominal surgery, I would also allude to the recently published able essays by Sir William MacCormac and Dr. Marion Sims, the latter paper dealing mainly with antiseptics and drainage in gun-shot wounds, these being, in Sir James Paget's opinion, "the most important, perhaps, of all the provisions to be made in healing wounds." Again, we have torsion in the treatment of hæmorrhage—a method to which such an impulse has been given by Mr. Bryant; and the treatment of aneurism by arterial ligation, without injury to the deeper structures of the vessels, by the methods of Porter and Barwell. In two cases I adopted Porter's method, using a wire, deligating the femoral artery in one, and in the other the abdominal aorta, Barwell's ligature—made from the aorta of an ox—a method recently tested in the Richmond Hospital by my colleague, Dr. Thomson, who deligated the arteria innominata for subclavian aneurism. Again we have in the treatment of fractures, immovable splints and improved methods of extension by weights, or more perfectly by screw action; of manipulation in the treatment of luxation; and in spinal disease, the use of the plaster-jacket of Sayre.

I need not dwell on the complete revolution in ophthalmic and aural surgery that has occurred, and of the light that the ophthalmoscope of Helmholtz has shed, not alone on ophthalmology, but on pathology in its widest sense; or on the other instruments of precision constantly made use of Memorable as these advances would make any era in the history of surgery, they all pale before three I have yet to mention—advances which the surgical historian will doubtless point to and emphasize as the three giant strides that the past half century has witnessed. I allude, first, to the discovery of the means of banishing pain during the performance of surgical operations; secondly, to the restoration of diseased or injured bones and joints necessitating resection; and, thirdly, the enunciation of the principle and establishment of the practice by Pasteur and Lister of antisepticism in the treatment of wounds. When we reflect that so large a part of these changes in surgical principles and practice has been due to the genius and honest labor of so many workers in the United Kingdom, we may well feel a pardonable pride in British Surgery, and confidence in the coming triumphs of our art.

To anæsthetics, antiseptics, and osteogenesis, together with a few cognate topics, I would therefore now invite attention.

Whatever anæsthetic the surgeon selects—whether it be chloroform, ether, or both combined, bichloride of methylene, or nitrous oxide gas—we must admit that, even with the most careful precautions as regards the condition of the patient generally, the anæsthetic selected, the amount of it used, and the mode of its administration, the gauntlet of peril has still to be run. In truth, it is hardly to be expected that an agent which can so rapidly and completely paralyze our senses should not be attended with peril. Of the two anæsthetics, however, that surgeons as a rule mainly rely on —ether and chloroform—much has of late been done to diminish risk by limitation of the amount of the anæsthetic used; by the gradual introduction of it into the system; by the avoidance of ether in infancy and extreme age, in the puerperal state, in hysteria, and also when there is reason to suspect the existence of any acute or chronic form of renal or pulmonary disease. In the use of chloroform the ever-present risk of cardiac paralysis appears to be increased when any functional or organic disease of the heart is present, and is, therefore, in such cases, distinctly contraindicated.

Although the number of accidents connected with the use of anæsthetics is fortunately very limited, still I feel sure that by more accurate knowledge of the facts I have mentioned, by entrusting the duty of administering anæsthetics solely to persons of experience and judgment, and by a stricter adoption of the rule so happily formulated by Mr. Jonathan Hutchinson in reference to the desirability of using chloroform in cases below six and above sixty years of age, the number of these regretable accidents would be still further largely diminished. In the majority of cases, however, I would unhesitatingly prefer ether. In using it, there is greater economy of time; it is, with the necessary precautions taken, safer; there is, as a rule, less sickness, and return to sensibility is slower. To obtain these advantages—which, with others, have been so well and systematically formulated by Mr. Teale (*British Medical Journal*, March 11th, 1882)—regard must be largely had to the method employed of administering it; and I am of opinion that one in which the air is rebreathed by the patient, as in the inhalers of Morgan, Ormsby and Clover, should be preferred, as so great an economy is effected thereby, not alone of ether, but of what is of far greater importance, of heat in the air-passages, the inspiration of a large quantity of cold ether vapor tending to induce respiratory syncope.

In these instruments, the inhalation of a combination of ether-vapor and carbonic acid gas occurs. It does not, however, appear to be clearly ascertained whether in this fact there is the introduction of an additional element of danger or not. Opinion on this point is still greatly divided. One would say, *à priori*, that there was; but experience has not established the fact.

Of the countless benefits conferred on man by anæsthetics, of the suffering prevented, of the absence of all anticipatory fear of suffering, of the happy subsequent oblivion of all the horrors and details of the operation, and of the diminution of shock, it is unnecessary to speak. To these must be added the advantages which enable the operator to act with a deliberation and calmness, enjoying freedom from anxiety and care he could not otherwise have. Advantages such as these cannot be overestimated, being as signal to the patient and the operator as they are to surgery.

Although there is traditional evidence that the anæsthetic properties of certain plants—notably the mandragora—were known to the physicians of ancient Greece and Rome, and that in 1800 our distinguish-Sir Humphrey Davy, mentioned that nitrous oxide was "capable of destroying physical pain, and may be used with advantage during surgical operations," still it was not until 1846 that anæsthetics came properly within the domain of practical surgery, when Morton, in the Massachusetts General Hospital, first demonstrated the possibility of inducing anæsthesia by the inhalation of ether.

To Simpson is undoubtedly due the credit of discovering, in 1848, the anæsthetic properties of chloroform, and in giving an impulse to its adoption, such as his brilliant intellect alone could give; but still we must cordially, willingly, and gratefully endorse the opinion of Professor Gross, that, "if America had contributed nothing more to the stock of human happiness than anæsthetics, the world would owe her an everlasting debt of gratitude."

Considering that the treatment of wounds is, in Professor Humphrey's words, not merely "the first stone, but also the corner-stone of surgery," antiseptic practice should rank, in my opinion, as the greatest of the surgical advances that the past half-century has witnessed. It deserves a special attention, not merely on account of the results of its adoption, but also because surgical opinion is still so divided about it; an unsettlement to which an impulse has been given by Mr. Savory's remarkable address at Cork, and by the observations on the value of carbolic spray made by Mr. Lister himself at the International Medical Congress last year. As regards Mr. Savory's denunciation of Listerism, I would say that, after reading it, and also the able reply to it by my colleague, Dr. Thomson, one cannot but come to the conclusion that, when the address is stripped of all its brilliant eloquence and rhetorical decoration, two facts are, to our surprise, brought clearly to light. One is the admission of the germ-theory of putrefaction; and the other, that the method of dressing employed by Mr. Savory is essentially antiseptic, consisting as it does of many of the features that characterize Listerian dressings; for example, carbolized catgut ligatures, carbolized oil, drainage, and washing the wound with a weak permanganate of potash lotion or "some other potent antiseptic." Now, as the author of the reply to which I have referred properly asks, "Is this method fittingly characterized by its simplicity and the entire absence of all novelty?"

In reference to Mr. Lister's statement on the value of carbolic spray, about which there has been so much unfortunate misconstruction and misunderstanding, I would certainly say he did not surrender his position in any way. He did not, as was said to me, in terms more picturesque than accurate, by an eminent surgical friend on that occasion, "inter antiseptic surgery and then sing a dirge over it." On the contrary, he stated that he looked forward to obtaining a more perfect and convenient mode of asepticism than that afforded by carbolic spray.

Considering the subject from a purely practical point of view, it appears of little consequence whether we accept the views recently discussed by Dr. Burdon Sanderson, or those of Ogston and Heuter, the former maintaining that the inflammatory exudates of a wound do not depend primarily on the contact with them of atmospheric organisms, but that their secondarily infective character does; in other words, that atmospheric organisms *per se* are not necessarily a source of danger, nor do they predispose to the formation of inflammatory exudates, but that they do exercise a baneful influence on the latter by rendering them infective. To quote his words, "they are not so much mischief-makers as mischief-spreaders." Two distinct functions are attributed by Burdon Sanderson to these organisms; one "of developing what may be called the phlogogenic infection, and that of conveying it to all parts of the body." Ogston and Hueter, on the other hand, maintain, and furnish strong arguments for their views, that septic organisms are primarily the sources of all the inflammatory and other troubles to which wounds are liable, and that, under aseptic conditions, these dangers can be avoided. It is not my purpose to discuss which of these theories is likely to be correct; for whichever view we adopt, the necessity for thorough antiseptic precautions remains the same. Assuming that Burdon Sanderson's theory be correct, and that inflammatory exudation is the physiological and harmless outcome of a traumatism, can we say how long it will remain so ? How long or how short a time it may take to become infective, whether days, hours, minutes, or seconds ? Is it not in accordance with all reasonable probability that the time must be ever-varying; and, assured of this, should we not take every precaution to prevent the entrance, neutralize or destroy the *noxa* or septic agency? Have we any means of estimating the power of resistance to the action of septic agencies, or of telling when will commence those chemical putrefactive changes, the sources of the disasters of surgery which antiseptics so powerfully strike at, prevent, and destroy?

The essentially weak point in the persistent and obstinate opposition to Listerism is the almost universal admission of the truth of the germ-theory of putrefaction. If the fantastic theory of heterogenesis had not long since been swept into the deserved limbo of other exploded doctrines, there would be some scientific standpoint for those opposed to Lister's theory and practice. But not having this, and admitting the truth of the germ-theory of putrefaction, they surrender their position. An attempt has been made by Mr. Lawson Tait to draw a distinction between the effects of germs on dead and living tissues, the only serious consequences being, it is alleged, those which result from their introduction into the system through the medium of dead tissue. Such is the contention. In a word, it comes simply to this: that, if the dead tissue-factor were non-existent, the organisms would remain harmless; if, on the other hand, it be present, they become hurtful. But those who hold this view, ignore the elementary fact that there never was a wound, and especially one in which vessels are tied or twisted, in which dead and living tissues were not at once brought into contact. Assuming, however, that this was not the case, has it not been shown on clear evidence by Dr. Burdon Sanderson that septic agencies generated in the organism may induce idiopathic inflammation without the medium of dead tissue? Also that, in acute peritonitis, septic organisms can, through the medium of the lymphatic vessels, be conveyed into the blood-streams, and, to use his words, "carry with them a phlogogenic virus, by virtue of which, wherever they lodge, they become the starting points of infective abscesses." Again, that similar phenomena are observed in connection with ulcerative endocarditis, confirming the observations of Weigert that, in variola, they find their way "in myriads" into the circulation, and eventually find a resting place in the capillaries of the internal organs, where they become nuclei of infective abscesses (*British Medical Journal*, April 15th, 1882).

If such phenomena are capable of being produced in the organism without the intervention of dead tissue, which appears to stimulate septic agencies to such pernicious activity, there is certainly all the more reason for using means to neutralize or destroy them, when, as in all wounds, dead and living tissues are brought into contact.

Those who advocate and practice what they are pleased to term a "modified" antiseptic system, attempt, in fact, in a roundabout, clumsy, inefficient way, to do precisely what those who practice Listerism achieve by means which are the outcome of accurate scientific research.

The aim in both cases is to neutralize or destroy the agencies which predispose to, and produce the *materies septica*—in the one instance by numerous uncertain and often inefficient methods; and in the other, by the unerring artillery of chemical agency.

Among many depreciatory remarks that have been made in reference to Listerism, is one based on its alleged want of originality. It has been stated that both antiseptic principles and practice were understood, recognized, and appreciated by many of Mr. Lister's predecessors and contemporaries. Foremost among the latter, M. Maisonneuve has been mentioned. Having attended the *clinique* of that eminent surgeon for two sessions, in 1864–5, I am in a position to mention the nature of the wound-dressings then employed by him. With a large syringe, a quantity of a weak solution of "*acide phenique*" was applied to the wound, then a piece of linen or cloth, perforated with numerous openings and covered with a yellow-colored grease, was placed on the wound, secured by a dry compress and bandage. Such were the antiseptic dressings of which Lister's, it is alleged, are only a somewhat complicated, expensive, and, in many cases, dangerous reproduction.

It has been stated that ovariotomy should be considered the touch-stone of the efficacy of the antiseptic treatment of wounds. I do not think so (although my successes in ovariotomy date from the time I adopted the system), and for the reasons given by Professor Lister. First, the disposition of a large serous membrane to absorb rapidly the plasma from the cut surface, the absence of tension, the high vital power of the peritoneum in uniting after being wounded; and, lastly, that bloody serum is an unfavorable medium for the growth of micro-organisms, a fact directly at variance with the dictum of Keith, that it is the "enemy of the ovariotomist." One of the best tests, if not the best, for the value of antiseptic practice is resection of the knee-joint, as there are so many circumstances that militate against the immediate union being obtained after it. In the first place, the cases requiring so formidable an operation are, as a rule, in a condition of great physical exhaustion consequent on long confinement, and probably protracted suffering of mind and body. The wound is of necessity a large one; the operation occupies a considerable time; two large freshly cut bone surfaces are made, between which union is to take place; and, lastly, there is the great difficulty of keeping, no matter what appliance be adopted, the limb absolutely at rest during the process of union. Before the adoption of Listerism the surgeon anticipated that four, six, or eight months, or longer, would elapse before union took place, and it was always a subject discussed at consultations on these cases, previously to operation, whether the patient would have strength to indure so protracted a suppuration. As an illustration of how changed matters are now, in a series of fourteen of my cases of excision of the knee-joint, the wounds in nine of them united without a trace of pus production; and in the last of them only two dressings were required subsequent to the one applied at the time of the operation, and in seven weeks after, the patient was up and going about. Another antiseptic triumph was the case of a boy with extensive necrosis of the fibula, sinuses, and suppuration existing at the time of the operation. I excised subperiosteally the diaphysis of the fibula, and the case pursued a perfectly aseptic course, the evidence of new bone-formation being also incontrovertible. From the fact of there being no pus production subsequent to the operation, notwithstanding the pre-existence of suppurating sinuses, a special interest attaches itself to this case. I can only account for this exceptional circumstance as a result of the careful washing of the sinuses by carbolic acid and zinc chloride solutions. A still more remarkable case was that of a youth who was under my care last November. He trod on a triangular piece of glass which, having passed deeply into the sole of his foot, was with difficulty extracted. An acute suppurative inflammation, involving the ankle-joint and extending as far as the knee was the outcome of the injury. There was incated by both pulse and temperature very high fever, and the condition of the patient was most critical. I made free incisions under the spray on both sides of the ankle-joint, and gave exit to pus and synovia in large quantity. Into these openings I injected a weak solution of eucalyptol and inserted Neuber's drainage tubes. Next day I found pulse and temperature normal, and from this the case pursued an aseptic course, and in less than a month after, the patient left the hospital, the foot being in a perfectly normal condition, all motions of its joints being free and unattended with the slightest stiffness or pain. In another case, I cut down on an ankylosed hip (the limb being so flexed as to be perfectly useless to the patient), and divided the neck of the femur with an osteotome, and straightened the limb. The wound healed without pus production, and a freely moveable false joint was formed, and the patient is able to walk several miles without inconvenience.

Another antiseptic triumph was obtained in two cases of amputation at the hip-joint. In one of these there were pre-existing sinuses and profuse suppuration, and, notwithstanding, I succeeded for eight days, during the most critical period of the patient's convalescence, in keeping the wound aseptic, and preventing the occurrence of surgical fever. The result in the second case was more remarkable; not only during the healing of the wound was there no pus production, but pulse and temperature hardly ever rose beyond the normal standard. The skin was unbroken, and on the evening previous to, and also on the morning of the operation the patient had a eucalyptol bath. Looking at these few cases—few, not because I could not largely supplement them, but because they are sufficient for my present purpose—I would ask could such results have been obtained previous to the Listerian teachings of the principles and practice of antiseptic surgery? There can be but one reply—impossible.

In giving the details of these antiseptic triumphs I may be considered dogmatic and egotistical. If so, I regret it, for nothing could be further from my desire; still less would I seem captious or actuated by any partisan spirit. I have mentioned them solely through a desire of having the truth recognized and established, and because personal experience is the soundest basis of honest conviction.

As regards the hygienic effects of the practice, I may mention some facts of interest noticed by me and my colleagues in the hospital to which I am attached. The building is a very old one, and was not constructed originally for a hospital. None of the more modern arrangements, now considered so essential, as regards heating, light, ventilation, etc., exist. It is situated in a poor, very densely populated part of the city, with tenement houses, dairy yards, cattle sheds, and stables in its neighborhood; and some of the houses in its immediate vicinity have been designated by the Medical Officers of Health as "fever nests." When I was a student there erysipelas and pyæmia were not unfrequently observed after operations even of no great magnitude; hospital gangrene too, I have seen several instances of—in fact, these three diseases constitute a grim trio, of which the surgeons had not unnaturally a dread. Let it not be thought that the occurrence of these was in any way to be attributed to want of care and attention to cleanliness. No cases could in this respect be more conscientiously or carefully managed. What now exists? Hospital gangrene is an extinct disease, nor have we observed, during a period extending over six years, a single case of erysipelas, septicæmia, or pyæmia following an operation in which the practice of Lister was accurately carried out; *accurately*, for everything depends on that. The practice has been well compared to a coat of mail—it must be perfect.

Similar testimony to what I and my colleagues can state has been given by many foreign surgeons of eminence, among whom I may mention Von Nussbaum, Bardeleben, Thiersch, Von Langenbeck, Volkmann, Esmarch, Saxtorpf, Championniére, and many others.

Much blame has been cast on Professor Lister and his followers for not having had recourse more largely than they have done to statistics, to prove the superiority of antiseptic practice over the older and alleged simpler methods of wound-dressing, and to show that, by the use of the former, we are more independent of those epidemic influences that have hitherto been so pregnant with disaster in operative surgery. It is not my purpose here to discuss the value of the surgical statistics that have been adduced to prove that the alleged simpler methods of wound-dressing are of equal efficacy to those of Lister, especially as most of them have a strange family resemblance to the latter; but this I will say, that whatever value is to be ascribed to accumulated figures—often sadly fallacious

—that value is not to my mind greater, or at all so great, as the often repeated occurrence of test-cases, recorded daily, not alone in a particular hospital, town, or country, but in hospitals in all climates and conditions, where the hygienic surroundings are brought to the highest known degree of perfection, as well as where they are in a condition the most deplorable. Such records carry more weight with me than the inflated statistics from any particular hospital, or the alleged results obtained without antiseptics after any special operation or group of similar operations.

Mr. Savory dwelt at great length on the statistics of operations at St. Bartholomew's Hospital. These were, no doubt, very important, and probably carried conviction as to the soundness of the conclusions drawn from them to the minds of most of his hearers. In various points, however, they were unsatisfactory to me. For example, among others, no mention whatever was made of the operation of ovariotomy, in which procedure, although some regard Listerism as positively injurious, still many others take an opposite view, and think with myself that it has probably done more than anything else to diminish the mortality of the operation. It was unfortunate, in my opinion, that the facts in respect of this particular operation at St. Bartholomew's Hospital, before and after the introduction of Listerian antiseptic practice, were not stated.

Although I do not regard surgical statistics with the reverential awe that some do, who look upon them, in fact, as a sort of tribunal beyond which there can be no appeal, I observe that in a record of upwards of six hundred operations performed by myself and my colleagues at the Richmond Surgical Hospital, during the past three years—an institution which I have already spoken of as being hygienically in so unsatisfactory a condition—the mortality was 3.6 per cent.; and there was not a single case in which Listerism was acurately employed that was followed by any infective disease.

The discovery of anæsthetics, and the means of inducing osteogenesis, have largely widened the field of practical surgery. When we consider the revolution that has taken place, since the introduction of antiseptics, in the treatment of compound fracture, of abscesses — especially those symptomatic of bone-disease—of bursal tumors, of congenital as well as acquired osseous deformity, of ununited fractures, including those of the patella and olecranon, of foreign bodies in joints, of hæmorrhage and aneurism by antiseptic ligature, and of various diseases and injuries of the abdominal organs indicating the operations already mentioned, this may, I think, be said with even greater truth. To these may also be added certain thoracic affections, such as empyema, pericardial effusion, and pulmonary abscess, by which the wide gulf that so long existed between medicine and surgery has been to a great extent bridged over—uniting them together firmly, strongly and for ever.

It is a subject of regret to me that so many surgeons of long experience, and of great and deserved eminence, have been found who have either been disposed to discredit a thorough antiseptic practice altogether, or to have given but a very lukewarm adherence to it. Much allowance, however, must be made for the well-known and not unnatural dislike to change on the part of those, many perhaps advanced in life, whose early training has been so different to that now available. With their successors, more fortunately circumstanced in this respect, the case is different. Their condemnation has, I fear, been the result of apathy, indifference, and, in some instances, indolence, preventing them taking the trouble to learn either the principles or the details of the practice.

Representatives of what may be termed a Rip Van Winkle school of surgery, they differ in one respect from the mythical personage just alluded to. His ignorance of what was going on about him was the result of involuntary unconsciousness. But his surgical analogues, I fear, wilfully refuse to see, wilfully refuse to acknowledge, and wilfully refuse to recognize what has been and is being done. Strangely unmindful of the fact, that honest scientific toil has never yet proved other than fruitful of good, they promulgate views very acceptable to ignorance and indolence ; and make the land ring with the false and cruel tale that the value of Listerism is a delusion, a bubble, a shadow, and a myth—at once expensive, complicated, and poisonous. If, on this latter account, it is to be rejected, then may we, with equal justice, say : "Away with anæsthetics ; away with opium, mercury, belladonna, with half, or more than half, the means at our disposal for alleviating human suffering and prolonging life."

In the interests and for the credit of British surgery, it is time so unrighteous a warfare should cease. It is time that the irritating dust of an unreasoning prejudice should be swept away. It is time that one of the greatest discoveries and boons to surgery this century has produced should be universally recognized as such. It is time that its discoverer and exponent should be acknowledged as one of whom it may well be said

"With Genius Nature joins in everlasting covenant still,
The promises of one, the other fails not to fulfil."

The methods adopted for bringing about a regeneration of bones and joints necessitating resection on account of injury or disease, constitute an advance in surgery of such interest and practical importance as to distinctly merit special consideration. To adopt a measure by which the main support of a limb, when diseased, and not only rendering that limb useless, but also perhaps imperilling life by pain and exhaustive suppuration can be removed, with not a mere probability, but, in many instances, almost a certain confidence that it will be restored to the patient, is a triumph than which it is hard to conceive one of greater importance among the developments of modern surgery. The subject has been of keen interest to me for many years, since the time when, in 1865, I witnessed in Lyons many of M. Ollier's experiments, and subsequently repeated them. Strongly impressed by what I then learned, I have since in practice, as suitable cases presented themselves, adopted periosteal preservation in various operations on bones and joints, a procedure with which the names of the eminent surgical trio—Syme, Langenbeck, and Ollier—must for ever be associated. The operative measures on which my experience is based are resections of the elbow, shoulder, and ankle-joints ; resection of the diaphysis of the fibula in its entirety ; resection of the greater portion of the ulna; of metatarsal and metacarpal bones ; and, lastly, of transplantation of periosteum, as a part of the so-called Indian rhinoplastic operation. Still, though the good results obtained by this practice are, in properly selected cases, not open to question, there can be no doubt as to the existing unsettled condition of surgical opinion in reference to the value of the procedure. This, I believe, arises from a twofold cause, one being traumatic, from insufficient care being taken during the detachment of the membrane, and the second, the non-differentiation on the part of surgeons of the cases likely to be benefited, and those in which the adoption of the practice is, as a rule, attended with disappointing results. As to its value, when the membrane is comparatively healthy, and the patient young, there can be no question. The activity of bone production and other signally gratifying results of the practice must be acknowledged when performed under these circumstances. These results, however, are not so striking when the patient is an adult. In some cases, no bone production whatever is observed, and in others the osteogenetic process is slow, the product weak and liable to become absorbed. It should also be borne in mind that, in early life, the membrane has a dual function ; one, that of increasing the thickness of bone, and the other the repair of waste. In adult life, it is mainly confined to the latter. This rule, however, is not without exception. One instance I can recall of a man, aged 42, on whom I performed a resection of the upper end of the humerus on account of carious disease. The result was eminently satisfactory; not only was there a reformation of the bone removed, as evidenced by comparative measurement, but also a pseudo-arthrosis so perfect as to enable him now, as I have recently learned, to use his spade, to plough, and perform with efficiency all the ordinary duties of an agricultural laborer.

Another point worthy of consideration is the value of the practice in adults and children when the membrane is found to be thickened and pulpy. Among the former, as mentioned by McEwen, the osteogenic layer is, as a rule, found to be destroyed, the outer layer thickened, vascular, and lined with granulation-tissue, which soon undergoes fatty degeneration. From such a condition, no bone production could possibly be anticipated. On the other hand, a thickened, vascular, cell infiltrated, softened condition is not incompatible with its osteogenic layer being intact, and its activity in bone production unimpaired; in truth, not unimpaired, but exalted, as we observe in acute necrosis, and also in the development of syphilitic nodes. The condition of fatty degeneration of the osteogenic layer is found among both adults and children, but more frequently among the former. When found among the latter, the cases are, as a rule, badly nourished, anæmic, weakly, and scrofulous. The thickened, vascular, but intact condition of the membrane is what is observed among young persons, and its preservation, therefore, is obviously indicated. In adults, it is rarely observed.

The efforts to produce bone in experiments on the lower animals by periosteal transplantation have not been attended with any very marked success, nor have similar attempts in man been specially encouraging. In only one instance did Ollier obtain distinct evidence of bone formation from grafted periosteum. In the Indian rhinoplastic operation, I have undoubtedly succeeded, after transplanting the membrane from the frontal bone, in satisfying myself of the existence of bone reproduction. When left attached to bone, as in Von Langenbeck's modification of this operation, the result has not been so good, owing to the liability to necrosis of the transplanted or detached portions o bone.

As regards bone transplantation, I cannot speak from any personal experience; but, in connection with this all-important subject, I must allude to the great stride made in this direction by Dr. McEwen of Glasgow. The case of inter-human osseous transplantation, in which over two-thirds of the shaft of a humerus was restored, and an account of which was communicated to the Royal Society last year, is one which must stand out in bold relief in the history of this new departure in operative surgery—one which is with many others an outcome indirectly, perhaps, but not the less a result, of antiseptic surgery. For the experience derived from observing the progress towards good union, and without pus production of bad compound comminuted fractures, when pieces of bone completely separated, and even detached from periosteum, have, after being antisepticized, been replaced, lived, and eventually united to the neighboring osseous structures, tends, as McEwen has pointed out, to show the probability of transplanted bone living. The practice of inter-human osseous transplantation is one which of necessity is applicable to only a very limited number of cases, and the means of carrying it out must rarely be available, as fresh, human, healthy osseous transplants cannot often be obtained. The case, however, which I am glad to say I had an opportunity of examining, is so pregnant of interest, and so suggestive, that it must serve as an incentive to further effort to guide and encourage those working in this direction.

The subject of periosteal preservation naturally leads to that of joint resection, in which it has played so important a role. The resection, however, I wish more particularly to allude to, namely, that of the knee, is less associated with periosteal preservation than the other excisions. The surgical merits of this operation being so important and so vexed a question make it worthy of special notice. I will not, however, dwell at any length on the subject, having regard to the fact of its having been recently so ably handled by Mr. Holmes at the meeting of the Association, at Cambridge.

It is not surprising that its position as one of the resources of surgery is not yet generally appreciated, and that controversy should still so hotly rage about it, when we reflect that the majority of surgeons have hitherto regarded it in the light of a substitute for amputation. In doing so, a grave error has been committed, for the indications for one of these operations should never be those for the other. If we accept the view that tuberculosis, more particularly as regards its articular manifestations, is primarily local, but, as shown by Klebs, like cancer or syphilis, transmissible, and capable of producing a general infection, a view that mainly from a clinical standpoint I accept, then the question of the importance of early resection at once comes to the front. But it may be and has been said, notably by Mr. Macnamara of London, that in the early stages of strumous articular disease, affecting mainly the synovial membrane, that rest, good diet, and "convalescent homes," will suffice to cure the disease at this period of its development. I admit they may, but in a very small proportion of cases. I would be equally ready to admit that in a small proportion of cases intermittent fever may get well without quinine, syphilis without mercury, iritis without belladonna, and primary union without antiseptics. Who, however, would maintain that, because in a small minority of cases the desired results are obtained without such aids, that therefore it was open to discussion whether they should not be abandoned altogether? In dealing with a broad question, such as the surgical merits of knee-resection, the question as to a treatment that is only applicable to a small fortunately circumstanced minority, and the advantages of which are very problematical, should scarcely be mentioned when a practice is under discussion applicable to the masses of mankind in all countries, climates and conditions, without convalescent homes at their disposal, or ways of getting constant skilled aid in carrying out an "expectant" treatment for two or three years—a treatment from which no better result than ankylosis can be expected. In patients, too, with a predisposition to secondary tuberculous deposits, the probability of the recurrence of the disease after "expectant" treatment must be borne in mind.

From my experience, I believe that excision of the knee should not be looked on as a last resource, but that the operation should be performed before any profound organic changes take place, and that when the following conditions are fulfilled: An unbroken skin, an all-important factor; the disease limited, and to the soft structures, an efficient method of fixation applied, and a rigid system of antiseptic dressing of the wound adopted, primary union may in the great majority of cases confidently be anticipated. The alleged unfavorable results of the operation, especially in early life, are distinctly opposed to my clinical experience.

In another group of operations—namely, in amputations—the preservation of periosteum is, according to Von Langenbeck, Trélat, and others, attended with advantage. The formation of a periosteal curtain to cover the cut surface of the bone and its medullary canal is believed to act as a shield or barrier against septic agencies, and diminish the chance of the occurrence of some of the secondary calamities, notably osteomyelitis, following amputations. The method I have in some instances adopted, and with success, is, making a somewhat quadrilateral-shaped flap at the membrane and letting it fall over the cut surface of the bone. Another method that of M. Trélat, is to detach the membrane all around the bone for fully an inch below the point where the bone had to be divided, making, in fact, a sleeve-shaped flap. This plan must, however, materially protract the operation.

This leads me to consider some other comparatively recent improvements in the operation of amputation, and to bear my testimony to the great advantages to be derived from the adoption of the principle of long anterior flaps, the chief credit for establishing which belongs to the late Mr. Teale, of Leeds; and it is a source of pleasure to me that the advantages from his method of amputation were so soon, and continue to be so fully recognized and and appreciated in Dublin. In reference more particularly to thigh-amputation, I cannot refrain from noticing the procedure in which the principle of the long anterior flap is embodied—namely, the " single flap' or " single-skin flap" operation of the late Mr. Carden, of this city. In introducing this operation, he won for himself a lasting repute for originality, ingenuity, and skill; and I am sure that, in expressing a deep regret at the absence from among us this day of so accomplished and able a surgeon, so wise in council and full of resource, in whom, in truth, were to be found all the qualities of a great surgeon, I only feebly, perhaps give utterance to the thoughts of all those who knew him, appreciated him, and had the privilege of his friendship.

Griti's operation undoubtedly owes its parentage to that of Carden; but, although the retaining of the patella and consequent preservation of the normal attachments of the extensors of the leg is a plan as good as it was original with Gritti, still the details of this method prevented the realization of those advantages which in principle it embodied. Hence the modification which I have ventured to term "supracondyloid amputation"—an operation which, retaining the advantages of Gritti's method eliminates its defects by lengthening the anterior flap, forming a posterior flap one-third in length of the anterior one, suturing the patella and femur together; and, lastly, and most important of all, by making a high femoral section, but not one involving the medullary canal.

The special advantages that may be claimed for supracondyloid amputations are:

1. That the posterior surface of the anterior flap being covered with a natural synovial membrane, the chances of suppuration and purulent absorption are diminished.

2. Any possibility of the split patella shifting from its place on the cut surface of the femur is prevented by the high femoral section, and by suturing the two bones together.

3. The vessels are divided at right angles to their continuity, and not obliquely, as in other flap operations.

4. The existence of a posterior flap diminishes the chances of any wide gaping of the wound; while the anterior flap, being oval, increases the chances of the stump tapering gradually towards its extremity and assuming the form of a rounded cone.

5. The preservation of the normal attachments of the extensors of the leg.

These advantages embody those of both flap and circular amputation of the thigh, and, at the same time, eliminate their defects.

Although there are many surgical topics of interest and importance, I should wish to discuss, did time permit, there is one bearing directly on surgical progress which, though it must be but briefly alluded to, I wish particularly to mention. Recently, all who have at heart the progress of scientific medicine and surgery must have rejoiced at the formation of the Association for the Advancement of Medicine by Research. The step augurs well for the future of physiology—the science which is not alone the foundation, but also the framework of surgery, as it is also of medicine and pathology.

At the opening meeting of the Association, Sir George Jessel (the Master of the Rolls) well remarked that there are two things the public require to be instructed in—one, that the future progress of medicine must rest on science; and the other, the necessity for experiments on animals. The great practical difficulty, however—one which I hope will in time be overcome—is that the Association will have to deal with a section of the public who refuse to be instructed; refuse to recognize established facts; refuse to weigh evidence; substitute groundless assertion for argument; and willfully and deliberately accuse the scientific physiologist of a selfishness and cruelty as heartless as it is cowardly. In creating so unjust a prejudice, there is in some instances, doubtless, an unconscious, but in many others, I fear, a wilful attempt to pervert the moral sense of the public. It will be no light task for the Association to instruct such persons, whose wrath is reserved—not for the sportsman, gourmet, or military tyrant, but for the physiologist, who is outlawed if he does not fulfil all the vexatious conditions of an extraordinary Act, the passing of which was simply an insult to our profession, whose aim is ever, not to cause suffering, but to relieve it—not to destroy life, but to save it; and who are ever ready willingly to imperil, and often, with true heroism, do lay down their own lives to save one that is, perhaps, worthless to all but the possessor of it. If in this contention a heartless cruelty is found, on which side is it? Is it with those whose objects I have indicated, or with those who hinder and thwart the realization of them?

It has been stated with the inaccuracy that, as a rule, characterizes the utterances of, in many instances, perhaps, well-meaning, but not the less essentially mischievous section of the community, that takes so keen a pleasure in discrediting experimental physiology, that no practical benefit has accrued to medicine or surgery from it. I would, leaving what has been done in this direction in medicine to other and abler hands, suggest to their consideration a study of Mr. Gamgee's recently published and able work on "The Influence of Vivisection on Human Surgery." In this, it will be seen that many of the most important developments of surgery are the direct outcome of physiological experiment—as, for example, subcutaneous surgery, arterial ligation, torsion, transfusion, the introduction of the *ecraseur*, periosteal preservation, artificial respiration; and, among others, such operations as nephrectomy, ovariotomy, excision of pylorus, and amputation at the hip-joint; and last, but not least, the introduction of the hypodermic injection of various medicinal agents.

It seems, however, and with shame we must confess it, that we are living in an epoch in which the labors and achievements of the greatest physiologists and surgeons, both living and dead, are forgotten and ignored; and for those who endeavor, even at a long interval, to follow in their steps, the statute, which is a blot in the history of scientific progress in England, has been enacted, and enacted by those who are every day only too willing to avail themselves of the great advantages resulting from labors which now cannot be continued, save under restrictions which are well-nigh intolerable. Professor Tyndall has well said that, "however noisy the fanaticism of the moment may be, the common sense of Englishmen will not, in the long run, permit it to enact cruelty in the name of tenderness, or to debar us from the light and leading of such investigations." The great fact to be taught, the great fact to be learned, is, that to experimental physiology must we chiefly look for the means of lighting the paths traversed by those who work in the van of medical and surgical progress; who work conscious that, compared to what may be hoped for in the future, the advances already made are only—as Newton said of his greatest achievements—like those of a child playing with the waves as they break upon the sand. But,

> . . . . "Strong in will,
> To strive, to seek, to find, and not to yield,"

they still labor to realize the fair aspiration that the book of Life may yet be read, not by the dim and flickering rays of opinion, but by the clear and steady light of ascertained fact. Seeking for means to baffle those diseases, fruitful sources of so much sin and sorrow, that up to this have defied our best directed efforts to destroy. Earnestly striving to rescue medicine and surgery from the mists and shifting quicksands of mere clinical observation, and fix them on the foundation of science, and who, ever yearning, like Goethe, for "Light—more light," patiently seek in the exhaustless world of Nature for the golden grains of fruits.

Are these efforts to be thwarted and hindered in the country of Harvey and Jenner? It has been well said by Jellett, that "the place which our country holds among nations must be fixed by the labors of her children; that their success is her glory; that their defeat or dishonor must fall darkly upon her." On us it devolves to see that nothing is done which may render such defeat possible; nothing done that will allow the laurels of scientific medicine to be cruelly snatched from us and transferred to other countries and other peoples. This may, perhaps, be called a selfish form of patriotism. Perhaps it is; but, if so, I would ask, need we be ashamed of it?

I have mentioned many achievements in surgery the past half century has witnessed. Fifty years hence, this great Association will, I hope, meet here again to celebrate its centenary; and my successor will, I trust, with greater ability and eloquence than I can command, tell of as great or greater triumphs than I have done. To enable him to do so we can all aid, some powerfully, others feebly; but still every unit in this great brotherhood can assist; and it should be our ambition as well as our prayer that, when the hour arrives for us to cease from our work, we may all feel, in looking back on our lives, that we have done something to that end. Something—be it great or small—in the interests of our common humanity, in the interests of our loved country, and of a pure devotion to truth, to render the science to which we have devoted our lives, nobler and fairer than before.

President's Address, Delivered at the Fifteenth Annual Meeting of the British Medical Association, Held in Worcester, August 8th, 9th, 10th, and 11th, 1882, by William Strange, M. D.

Gentlemen, Fellow Members of the British Medical Association.—My first duty on assuming the honorable and distinguished position to which the kind favor of my medical friends and neighbors, and the courteous custom of our Association, have called me, is to give you all, in the name and on behalf of every member of the profession in this city and of our local Branch, as well as of numerous other brethren residing in the West Midland district, the most hearty welcome that words can convey; a welcome to Worcester, which we are accustomed to call "*civitas in bello et in pace semper fidelis!*" And faithful too, I trust, she will always be found to the traditions and the welfare of that great Association which first saw the light within her walls.

Gentlemen, the city in which we are met is but a small one compared with many of those in which you have held meetings in former years. I trust that you will not assume that the welcome you will meet with in Worcester will be commensurate only with its circumscribed limits and somewhat scanty means of accommodation; rather consider it, I pray you, in the light of the relationship which subsists between it and you, which, with scarcely a metaphor, may be called that of parent and child.

The return, after many years, to the place of our birth, or to the scenes of our childhood, must always be a matter of interest; sometimes, indeed, of sad and sorrowful interest. Some of you may, perhaps, be experiencing something of this feeling now. You, the seniors of our Society, who, perhaps, in long past years, have sat in this very hall alongside the fathers of our Association, now gone to their rest, you cannot help but feel regret to see their places now filled by others; and especially must you regret that this chair cannot now be taken by him who not only filled the chair, but the whole meeting, with his spirit, three and thirty years ago.

But there is, surely, sometimes a pleasure in returning to our old home; as, when battered about by the world, and evil entreated of it, it may be, or evil spoken of, we return and find the paternal arms still open to receive us, the maternal board spread ready to welcome us, all our errors and wanderings condoned or forgiven. Something akin to this feeling also may be present to some of your minds to-night.

But whatever our feelings, be they sad at the loss, or joyful at the recovery, of old friends, or simply pleasureable at the prospect of making new acquaintances, let us rejoice in remembering that this is our Jubilee; the day when of old, you know, all estrangements and divisions were forgotten, the bond allowed to go free, and when fresh help and a fresh start in life were never denied to the unfortunate or the unsuccessful.

As for us, here in Worcester—to receive this great assemblage within our walls; to witness the full fruition of the efforts made here fifty years ago for the elevation of our profession and the perfecting of its power by the force of combination—this is our privilege and our glory to-day. May the spirit which animated our forefathers be with us now, and may we be found worthy to follow in their steps!

In the second place, I have to offer you my most heartfelt thanks for the honor you have conferred upon myself in placing me in this chair—a chair on how many occasions like this occupied by men distinguished by their talents! by men who have left their names engraved on the page of the history of medicine; or, at least, by men who have rendered great and prolonged services to our Association. I do not pretend to match myself with either class of these my predecessors. You have taken me from my quiet occupation in this provincial city, healing the sick, and rendering, when called upon, what aid I may to my brethren, and solacing an anxious life with that which is so dear to me, as to many, literary relaxation. You have placed me in a position of the utmost difficulty to fulfil with satisfaction. I must therefore bespeak your kind indulgence towards all my negligences and ignorances. In return, I can promise you one thing. I will endeavor to emulate my predecessors in this chair in zeal for your welfare by using my best endeavors to promote your comfort and happiness whilst you are under our roof. And allow me to add that in this endeavor I am cordially joined by every member of our Reception Committee, and by every member of the Worcestershire and Herefordshire Branch.

Gentlemen, we are met here to-day to celebrate the Fiftieth Anniversary of the birth of the British Medical Association. What thoughts are they which this event brings before our minds? Looking before and after, what retrospects, what anticipations? And first, how can we, here assembled, do honor to the august occasion? How ought we to acquit ourselves so as to be worthy to stand in the places, to sit in the seats vacated by the fathers, the *patres conscripti*, of our Association?

Our office, as physicians, you know, is to heal the sick, and to remove or assuage the thousand pains and miseries to which all flesh is heir. In doing this, the proper work of our calling at all times, we are to be honest, industrious, gentle, and true; acquitting ourselves with due regard to the sacred character of our calling, with all honor and honesty before God and the world; whilst towards each other we must always be ready to tender the hand of loyal, helpful, friendship and sympathy; which, together, form the very motto and emblem of our Association. How far this ideal, in its double aspect, has marked the character of our profession since the foundation of this Society, might very well have engaged a portion of our thoughts to-night. But how we, here assembled, shall act, as we journey onwards in company with the second half of the century of our Association's existence, demands an immediate answer. For the eyes of our dead fathers may said to be upon us ; and be sure that those of posterity will look back upon our deeds. How we should comport ourselves, then, under these circumstances, let each one determine before he leaves this hall to-night.

In fixing upon a subject wherewith to occupy your attention for the hour which prescriptive custom allows to one who occupies this chair, greater difficulties than those which, I presume, have usually beset the orator of the evening were present to my mind. The occasion seemed to demand something out of the usual line. The Jubilee must have its *eloge.* Had it been otherwise, my task would have been easier. The simple description of the "faithful" city ;—its history, its curiosities ; its interesting manufactures ; its grand old, and yet new Cathedral ; the beauties of the surrounding country ; the charm of its hills, and dales, and flowing waters ;—might well have presented fitting matter for this address, such as would best have suited my moderate powers to portray.

Or with greater fitness to the occasion, perhaps, and instructed by the early records of our Association, I might have told you the story of its birth within this city, and have given you some account of what manner of men they were who laid the firm foundations of the British Medical Association. Or, again, taking my cue from the very initial objects of our existence as a Society, I might have endeavored to trace the progress which its members have made in the knowledge of their art, and in the exercise of that good will and generous help towards each other, which are the two pole-stars of the Association itself. Or, lastly, I might have endeavored to lay before you a kind of fifty years' book, directing your admiration to the great beacon lights of progress as they passed across the canvas of the panorama, and pointing out, step by step, the progress which has been achieved.

But, Gentlemen, there were objections to each of these courses. The story of our ancient city is well known to most of you

Its curiosities and manufactures, especially that beautiful one of China, will all be open to your inspection during your stay here, and I hope you will make good use of your opportunities of investigating them. Again, the history of our Association, does it not lie open to you, in its earlier records, in the pages of the *Provincial Medical Journal and Transactions ;* and, in its later stages, in those of our present *Journal* ? Even but as yesterday the *Journal* set forth this history in an admirable manner, and so cut that ground from under my feet. Moreover, to-morrow has been selected for the celebration of our Jubilee, and that day will be the most fitting on which to celebrate the fame of our founders (amongst whom stands *facile princeps* the name of Charles Hastings), and to take a review of the work which has followed their labors. To open up to you the fifty years' book, and to show you in a detailed manner the progress of medicine as a science and as an art during that time, would be too gigantic a task for me to attempt, even had it been practicable within the time at my command.

I therefore propose to ask your kind attention to some remarks, not upon the progress of medical science strictly so called, and its relation to the advancement of science in general, a theme which I trust this jubilee has inspired some abler pen than mine to essay ; but upon what I may call the revival and the survival of medicine in these kingdoms. I ask you to accompany me in an endeavor to trace the evolution of the medical mind during the past half-century ; viewing that evolution or development in its tripartite aspect, viz., the intellectual, the moral, and the social aspects. After that, if time permit, we may try to make a forecast of what the future, the survival, is likely to be, taking our material from the history of the past, and the survey of the present.

PART I.—THE REVIVAL OF MEDICINE.

Turn back with me now, in memory, to the decennium which fell between the years 1830 and 1840. The times were pregnant with mighty changes—political, social, and scientific. To those whose memories are able to carry them still further back—viz., to the period immediately succeeding the close of the great Continental wars, the collapse which followed the exhaustion of the nations by those wars must appear a most noteworthy circumstance. This period lasted from 1815 to the financial crash of 1825. The political collapse appears to have been accompanied by a corresponding mental stagnation. Science, which loves to dwell with peace and gentle intercourse, had, indeed, been quietly working in their absence, unnoticed in the political turmoil, and had made frequent efforts to obtain a hearing, but no one listened. The pipers were, indeed, ready, but no one had the heart to dance.

But when the material armies had exhausted their gigantic efforts to destroy each other, and to reduce the human race to impotence, and when the calm of peace had at length settled down upon the nations, then the pent-up forces of intellect burst forth. The mind of a nation so elastic as that of these kingdoms soon recovers power, and thus the losses and wrecks which political confusion had occasioned were soon effaced, and more than compensated for by the resources which scientific discovery opened out anew to enterprise. For no sooner had a fresh decade (that of 1830-40) opened, than we find the repressed forces of thought and research bursting forth from all restraint in many directions In our own country, perhaps, more quickly than on the Continent, the damage done by the political hurricane of a quarter of a century's duration soon began to be effaced. New enterprises were opening up to develop commerce, and new forces were sought for to accelerate their operation. Following in the earlier steps of Watt, of Boulton, and of Arkwright, Stephenson, and Brunel, Wheatstone and Rowland Hill were transforming at once our commercial and our social intercourse. Political enfranchisement was the necessary corollary of the desire for freedom to speak and freedom to act. And then came that new power, the power of combination and association, which, whilst even in its infancy it did more than anything else to reinstate the exhausted nations, appears to be destined, in the end, to obliterate all distinctions, political and civil, and, if anything can, to bring about the social millennium of the world.

Combination, applied to the exercise of thought and to the diffusion of knowledge, resulted in the formation of those great societies of which the "Provincial Medical and Surgical Association" was neither the meanest or the least valuable. The year preceding the birth of our Society—viz., 1831, had seen the "British Association for the Advancement of Science" launched into existence, our Sir Charles Hastings having been one of the original members. A few years before, the Society of German Naturalists and Physicians had been instituted. And, in July, 1832, the foundation stone of our own Society was laid in this city by its distinguished and ever-to-be-respected founder, Charles Hastings, and his small, but devoted band of coadjutors

Gentlemen, time will not allow us to extend our review over any other field than that of medicine, and that in our own country. Let us survey, for a moment, in retrospect, its condition at the time of which we are now speaking.

Inasmuch as there were great men in Greece before Agamemnon, so also there were great names in medicine before 1832. But looking back upon that immediate period, what do we see? Both at home and on the continent of Europe, that decade was distinguished by a galaxy of names, the like of which, at one period of time, the world has rarely, if ever, seen. There were, indeed, giants in those days. Recall to your minds the names of Wilson Philip, who once lived here in Worcester; of Lawrence, of Abernethy, and of Cooper, all of whom, however, were already passing away; and then of Copland, of Latham, of Marshall Hall, of Brodie, and of Watson, in England; of Barclay, and Gregory, the Monroes, and the Thomsons, of Knox, Alison, Bell, and Christison, in Scotland; of Graves, and Stokes, and Colles, and many others in Ireland. Nor was the Continent in any way behind us. I, myself, had the pleasure and advantage of hearing Louis expound Laennec, and of literally sitting at the feet of Andral, Chomel, Magendie, Roux, and Milne-Edwards; whilst Rokitansky, Scoda, Liebig, were raising the German school of medical philosophy from out of its backward, or, at least, little known, condition towards the pitch of eminence to which it has since attained. And not only was it in medicine proper that this great advance was being made. Biological science generally was reaping in this generation the benefits conferred upon it by the one which preceded it. Bichat and Barclay, Prochaska and Wilson Philip, were followed by Magendie and Fletcher, by Milne, Edwards and Marshall Hall, by Charles Bell. Brodie and Hope, and by a host of others second only in fame to those I have named-

Now, if you observe the characteristics of these men, whose honored names have since become as household words amongst us of a later generation, you will find that they were chiefly distinguished by two qualities; those qualities, however, being the Alpha and Omega of all scientific progress. They are, firstly, patient research and observation of facts, and thorough conscientiousness in the use of them; and, secondly, unswerving courage and truthfulness in announcing those facts to the world. The days of unquestioned dogma were passing away. Authority was voted to be unauthorized; and antiquity was looked upon as antiquated. Some amongst you may have read, as I did, forty years ago, Lawrence's celebrated "Lectures on the Natural History of Man," delivered before the College of Surgeons so long ago as 1817 and 1818. The sensation, as I, then a very young man, read them, almost took away one's breath whilst the bold, outspoken, fiery thoughts rolled forth in the most magnificent English, withering up as they went the antiquated and prejudiced carpings of Abernethy and others of his school.

And the works of these men, these classics of the early part of the country, what splendid works they were. Not only were they distinguished by a novel treatment of their various subjects; new, that is, in their entire freedom from ancient prejudices and servility to antiquated dogmas; and new, also, in the industry with which fresh facts were sought out; but they were especially distinguished by the method of their research. No deductions drawn from a few meagre facts, warped and manipulated to fit them to a preconceived theory; but the true Baconian system honestly adopted, and no conclusions come to but such as were justified by the data at command.

Then, look at their style! Not only, as I have said, were these men intellectual giants, but they were scholars as well. No doubt their scholarship was owing to the greater attention then paid to training in classical literature in the education of the physician than is the case now. And if we now believe that Latin and Greek are of less use to a medical man than anatomy and chemistry, we must at least allow that the cultivation of the former is more likely to beget a pure style of writing than that of the latter only. Compare the diction of Lawrence, of Bell, of Latham, of Watson, of Gregory, Alison, and Christison; of Graves and of Stokes, with that of their contemporaries in any other field of literature, and you will not have to blush for the great physicians and surgeons of that day. Of our own Watson, you know, it has been said that he made the Practice of Physic to read like a novel; and, in this respect, I think I may call him the Macaulay of medical literature; whilst the terse and transparent style of Latham and of Bell bears a close resemblance to that of Connop Thirwall, who, it is said, made but an indifferent bishop, but would have made a first rate Lord Chancellor or a great physician. I do not like to say anything illnatured of the style and diction of some of our modern medical authors; but, all the same, I think their time would not be altogether wasted, if, before putting pen to paper, they were carefully to peruse, and re-peruse, the works of the older writers to whom I have just referred.

Well, then, gentlemen, these were the minds and these the works whose influence was beginning to pervade our profession, from one end of the land to the other, about the time of the birth of our Association. Two years before Andral had published his magnificent work, the "Clinique Médicale," a work based upon nothing newer or better than the plan of Hippocrates himself: viz., the minute observation of innumerable facts, and the simple, truthful narration of those facts; classified but not not systematized; intended for the reader to digest and assimilate for himself in his own way; not prepared and "peptonized" as I may say, to suit the author's own taste and fancy. In all this, medical research was but following in the wake, or rather, shall I presume to say, keeping in the van, of the progress of the other natural sciences, especially the biological; assimilating and adapting to its own use all that was available or procurable from other fields of knowledge. But such minds as these, brought to bear upon every branch of the healing art, by the focusing power of the various debating societies, could not long refrain from gratifying the intellectual instinct to systematise the art and science of medicine; and thus it was that, just at this time, the *Cyclopædia of Practical Medicine*, edited by Forbes, Tweedie and Conolly, was undertaken. This work was a giant for the period at which it appeared. It was to carry on this record, in face of the progressive and continuous development of scientific medicine, that two of the editors of the *Clyclopædia*, but chiefly Forbes started the *British and Foreign Medical Review;* and well was their purpose fulfilled for a period of over forty years.

At this time Graves and Bell, and Latham, and Billing, and Williams, with their foreign allies, were revolutionizing the theory as well as the practice of medicine. Nor must the names of their Scotch and Irish contemporaries be omitted. The Monroes second and third, Alison, Thomson, Christison, and others in Scotland, and Graves, Stokes, and Corrigan, in Ireland, are too renowned to be forgotten. The medical societies in London were, as a consequence, enlivened and vivified by new facts and free discussions to a degree they had never known before. No wonder then, that, to a mind like that of Hastings, fresh from the warm atmosphere of the Medical Society of Edinburgh, the cold stagnation of a small provincial city was unbearable. He read papers, started journals and societies on a small scale; but it was not until 1832 that he received sufficient encouragement to venture upon that step which, he proposed, should result in placing the provincial practitioner in almost as good a position as his metropolitan brother.

And what was the condition of the provincial practitioner at this time? With the exception of a few local physicians of the older stamp, solemn, scholarly, and formal, and here and there an apothecary of more than ordinary acuteness of observation, there existed one dead level of mediocity; men without the ambition to compete with their metropolitan brethren, because the means of doing so were denied them. No sparks of genius emanated from their brains, because there was no mental friction to produce them. No doubt, it was the inferior education of the general practitioner that made literature distasteful to him, and scientific attainments rare; whilst the desire for improvement, which might casually arise, found no field for action. So he settled down into the mere copier of other men's prescriptions, and the collector of nostrums for certain symptoms. Bundles of prescriptions were handed down from one practitioner to another along with the practice. Having no other idea but that disease was an entity, he set to work to drive it out of the system by the popular means of bleeding, purging, and sweating.

If this were the intellectual status of the provincial practitioner half a century ago, were his morals and social status of a higher grade? I am not one of those *detractores temporis acti* who delight in recalling the caricatures, for they were caricatures, even then, of Fielding and Smollett, and, afterwards, of Dickens. Whilst the squire and the parson of the parish did not disdain to take their recreation in the parlor of the village ale-house, what wonder that the village doctor made that same ale-house his club also? But this, and his over-addiction to field sports, sometimes in company with his betters, but more often with his inferiors, drove away all desire for study, even if the means had been at hand, which, generally, they were not. So the top-boots and the red coat did duty for the stethescope and the test-tube; whilst the lancet was thrust into the arm of the too-willing patient, as recklessly and ruthlessly as the spur and the whip had been applied to the sides of the animal which brought doctor and patient together.

These were the palmy days of the provincial physician. Many times has he been figured, as, with solemn step and well-poised cane, he descended from his lumbering post-chaise at the door of some opulent patient. The arrival of this great man in some country town was quite an event, and the signal for all the blind and halt and lame to turn out literally for a touch of the great man's hand. Those who could pay pulled out their guineas; those who could not might, perhaps, count upon getting a glance and a word from the "Great Doctor," as he was called, as he passed through the admiring crowd to his carriage in the courtyard of the inn. His grand and pompous manner denoted that he felt himself a head and shoulders taller than the poor apothecary who stood by, meekly trying to catch at the incontrovertible dicta as they fell from the mouth of the medical oracle.

Well, both species are now extinct, or extant only as fossils in some remote locality. Let us now inquire by what agency they have become so.

Turning for a moment to the working of our own Association, it must, I think, be admitted that the aim of its founders was a true and noble one fitted for all time. That aim was, that knowledge should be freely and generously communicated by the free and generous intercourse between hitherto separated and scattered individuals. That this aim has fructified so as to justify its conception is, I venture to think, proved by what we see here to-night; by the vast numbers who now call the British Medical Association their professional parent; by our large and frequent gatherings for the promotion of social and scientific interests; by our current literature, and by the way in which it has forwarded those interests; and by the valuable and increasing efforts of research which the Association more and more supports and fosters.

Yet it must be confessed that, being what it was, the provincial profession in 1832 was scarcely ready for it. For some years, but little way was made. The meetings were small; and the communications, with some signal exceptions, were only second-rate; whilst the journal which contained them was as frequently uncut and unread as not. Like many other undertakings, it was a little before its time. That time, however, was soon to arrive; and we shall presently find that, like any venture founded upon truth and justice and the true wants of the community, it made way against all obstacles, and the result is what we see here to-day.

But another event, almost coeval with the founding of our Association, came to the rescue, and helped to make the decade 1830–40 forever memorable in the annals of British medical literature. This event was the establishment of the *Lancet* as the leading medical journal. The *Lancet*, indeed, dates back some eight years before this time, but it was a puny thing in the first years of its life. It might have been compared at that time to a wasp, buzzing about the ears of the drones of the medical hive; but, when remodelled and enlarged in 1831, it began a fresh era. We may now liken it to a weasel, or to a still more unsavory animal, the polecat, biting, scratching, driving out of their holes, with venomous scurrility, the "Bats," as it called the hospital surgeons and councillors of the Royal College, and hanging them up, like vermin on a barn door, to general obloquy.

This was the function of the *Lancet*, varied only by the publication of a few lectures and hospital cases, obtained amidst all kinds of difficulty and opposition, for several years after its commencement. But the services which this remarkable journal, after it had conquered its own independence, rendered to free medicine in the earlier days of its existence, amidst all its faults, failings, and even vices, were simply incalculable. Monopolies destroyed; hole-and-corner meetings and doings of the corporations for the benefit of the few to the detriment and exclusion of the many, exposed; pompous ignorance and overbearing imbecility held up to scorn; the oppressed and obscure, but honest and industrious seeker after truth, brought to the front. After a time, feeling its growing strength, this brave journal attacked the legislature itself. And it was time. Its apathy towards all that concerned the interests of our profession, displayed in its tolerance of the most abominable abuses and monopolies in high places; its utter neglect of the public health; the farce of the coroners' courts; its winking at the atrocious adulterations of the people's food; its inhuman neglect of the sick poor; and its disregard of all decency in respect of the burial of the dead; these abuses were one by one attacked, and their authors and abettors lashed with a pitiless and unsparing hand, until redress and reform were grudgingly conceded. The man who, whatever his faults, and they were many, spent the best part of his life in compelling the legislature to listen to his exposure and his complaints of these gigantic evils, and to redress them, was at length listened to, admitted into the legislature itself, became a politician, and spoiled! None the less does the memory of Thomas Wakley deserve this testimony from us, who now possess an organ of our own quite capable of maintaining those rights and privileges for which, in the early days of our Association, we had no sufficient weapon wherewith to do battle.

The work of the celebrated *Review*, which was commenced soon after the establishment of the *Lancet* was of a very different character from that of its weekly contemporary. The arms which it used were not those of the satirist. There was none of the withering mockery of the *Lancet*. It contained no offensive personalities, and made no capital out of mere personal failings or defects. Its characteristic excellence was fair play to all. To make a candid and intelligent analysis of the work under review, clearly setting forth what was new and interesting in the book, whilst errors or failings were pointed out with kindness and sincerity, this was its constant aim. At the same time, it industriously gathered together all that was of value in the current foreign literature, and laid it, almost for the first time, before English readers. It fostered the diffident efforts of youthful but original genius, and, by giving them an opening into the medical press, procured that attention to the works of little known authors, which we know, is so difficult to be obtained. I was pursuing my own studies in Edinburgh when the first number of this review was published. I was a constant reader of its varied and valued contents for upwards of the forty years of its existence; and, in common with all others who valued the best literature of our day, I grieved when, a few years ago, the neglect of a faster but, possibly shallower age, caused it to die of inanition.

But everything is not due to the great names of 1830–40. Those musty old tomes reposing so peacefully on the back shelves of our libraries, what testimony do they not bear to the self-denying spirit displayed by their authors in transcribing and compiling whole systems of medicine, gathered with a labor and amid difficulties unknown to us, from every accessible source, for the benefit of those who should come after them. Contrast *their* labors with those of our modern medical *dilettanti*, whose hasty and sometimes crude lucubrations are carried weekly by a free press into thousands of medical homes, and say if, in this imperfect sketch of the history of a half century's literature, these older fathers of the *ars medicinæ* should have been altogether passed over and forgotten ?

Gentlemen, I fear I have wearied you with these references to an almost forgotten past. But, if it is good for us to look today before and after, upon what we *were* and upon what we *are*, in the hope that we may find a true beacon light to guide us in the course on which we are now entering, viz., our onward journey in company with the second half of the century of the existence of the British Medical Association, I think the reference will not have been altogether out of place; for, if our fathers did greatly with the limited means at their command, we, with our far vaster opportunities, shall be expected at least to equal their deeds. If they laid the foundation of all that is valuable in our modern medical literature; of all that is exact and trustworthy in our scientific precepts; of all that is honest, free, and catholic in our investigation of truth; of all that is liberal, sympathetic, humane, in our intercourse with each other, and with the world; I think that it is due to them that this jubilee—this commemoration of the past and inauguration of the future—should not be allowed to pass away without justice being done to the memory of those whose labors have so greatly contributed to make such a meeting as the present possible.

In this imperfect and necessarily hasty attempt to trace the history of the medical mind during the past half century, I have made no mention of medical politics. Nor do I intend to do so now. A President's address, it is said, as it admits of no discussion, so if should contain no disputable matter. But I may briefly remind you that the great corporations which guard the entrance into our profession, and fix the initial requirements from each candidate, were at length roused from their long apathy, and their exclusiveness was finally broken down by the same active minds of whom I have spoken—those minds who determined that everything connected with medicine should be free. The College of Physicians, before so exclusive, somewhere about 1860 threw open its doors and its honors to all qualified applicants, come from what college or university they might. The College of Surgeons had somewhat earlier given an impetus to enlarged studies by the establishment of its present fellowship examination; and the sister establishments in Scotland and Ireland soon had to follow suit.

PART II.—THE SURVIVAL OF MEDICINE.

It has been often enough said, but never more to the point than by Dr. Acland in his address to this Association at Oxford in 1868, that "there are certain landing places in a man's life where it is desirable that he should pause and think." Let us pause here, in this landing place of our existence, this point between the fifty past and the fifty coming years, and look about us, and ask ourselves what manner of a profession ours *now* is ? what is the condition and tendency of its mind ? what are its aims ? and what are the means by which it seeks to accomplish these aims ? And here it is well to repeat once more, like the beautiful refrain which sometimes runs throughout an elaborate piece of music, the initial note, the *leit-motif*, the theme, or motto of our Association, which is this: the advancement and perfecting of medical science and practice, and the increase of helpful fellowship between all its members. Looking, then, upon the evolution of the medical mind as a continuous process, coming from whence we started, and going we know not whither, what are its characteristics at the present time ? The first and noblest, of them, I opine, is the love of liberty! freedom to think; freedom to speak; freedom to write; freedom to teach! Fortunately for us, we have no thirty-nine articles to subscribe. We have no senate to revise and overrule the decisions of the commonalty of medicine; no courts of appeal, like our friends the lawyers. The great corporations, so long as we do not get convicted of felony, leave us pretty much to our own devices. Neither do they set up any standard of correctness, either of theory or of practice. There is no theory which we may not promulgate; no practice, short of manslaughter, which we may not pursue. An unfettered press and open criticism are the courts before which all claims to new discovery, to improved practice, to advance in knowledge, must be brought. All must stand or fall by their own merits. Still, great names have their weight. The words of a Jenner or a Paget, compared with those of little known authors, are as the discharge of an eighty-ton gun compared with that of a pocket-pistol. Now the great value of this liberty, and the free organs which it has set up, must be evident to all. Its advantages in regard of freedom of debate, of teaching, and of writing, are too great ever to be allowed to be withdrawn from us under any circumstances whatever. For by it, original genius obtains an immediate and impartial hearing; by it the patient and self-denying laborers of industry and talent, who may have passed years in silent research, at length obtain their reward. Let us then never relinquish into the hands of the State the decision as to what shall be the kind and amount of our knowledge on entering our profession; or in what way, and under what restrictions, we shall conduct our experiments and inquiries into the laws of nature for the good of mankind; or in what manner, and for what reward, we shall carry our knowledge to the bedsides of our patients, be they the rich in their mansions or the poor in our hospitals; or, in what way we shall regulate our mutual intercourse. Over the church, and over the law, for obvious reasons, it may be desirable that the State should hold a check; but over the investigations of science, and over the application to practice of that science, we will have no master other than the moral conscience of our profession itself.

The profession itself, too, must be the judge of what constitutes real progression in the art of medicine, and of what are the best means of aiding and securing that progress; and the profession itself must confer the chief honors and rewards of well doing. Adventitious honors and state-conferred titles are all very well in their way; just as the riches and honors accumulated by the successful merchant or manufacturer are legitimate and of a certain value. But it must be the verdict of the profession itself which shall say, "Well done, thou good and faithful worker, be thou rewarded for thy faithfulness to truth, to nature, to humanity, by the acclamations from the thankful and reverent hearts of thy brethren." This is the true gold This is the patent of nobility conferred on real merit.

There is, however, unhappily, a foil to all this. For there is no human good without its admixture of intrusive evil. It is a fact that liberty, unrestrained, may degenerate into licence, and freedom from all control generate confusion. I have already said that the spirit of free inquiry long ago voted antiquity to be antiquated, and authority unauthorized. It is this spirit, carried to excess, which forms one of the nuisances of modern medical literature; when many a fresh investigator will treat his subject as if no one had ever done anything in it before; when many a young observer must narrate what he sees as if it had never been seen before; parading as new what may perhaps be found in Hippocrates or Galen; or, at the least, repeating in book and lecture what has been better said a hundred times before. Our current literature swarms with instances of this nuisance; for a nuisance, and a real weariness of the flesh it is to all readers who know the literature of the profession.

If, in the theory and in the abstract, licence, which is liberty run mad, tends to these results, what is the outcome when the same licence is applied to practice? Every man fighting for his own hand, and that hand against every man! Every one more or less unmindful of what is due to the rights and feelings of his neighbor. Self-assertion! Self-laudation! Self-sufficiency! and then the one step further ——! Gentlemen, the quackery, the charlatanry, that exists outside the profession will never hurt us. It is the quackery, the charlatanry, the false pretence, the dishonest self-seeking to be found within the profession, which, if unchecked, will bring disgrace upon us. But without dwelling upon this unpleasant theme, and the postponing for a time the question of a remedy for this licence, let us continue the contemplation of the better spirit of our profession at the present day.

A second grand characteristic of modern medicine, I take leave to say, is philanthropy. By this term, I do not mean to say merely that we are animated by the love of our species at large, by the common readiness to do good to our neighbor when opportunity presents itself; but that our profession is ever seeking out, by toil of body and study of mind, new modes of relieving human pain and misery; that it ignores its own material advantage whenever that is placed in opposition to the good of our patients, or of our neighbors; and that it ever seeks to promulgate, against its own material interests, the doctrine "that prevention is better than cure." I think many words are not needed to prove that this is so. Our sanitary amelioration, and the legislation which promotes it, are they not almost solely the work of our profession; aye, of this Association itself? And do we not almost invariably, when entering a house, inquire into its sanitary condition, and, when discharging a cured patient, endeavor to impart to him the knowledge how to keep out of our hands in future? And with educated and conscientious men it cannot be otherwise. Such men cannot see human pain and misery without an ardent and single-minded desire to relieve them; and they daily go out of their way and give themselves much trouble, which is not really demanded of them, to contribute to the comfort as well as to the cure of their patients. This self-denial and this true philanthropy are I am happy to think, daily becoming better recognized. The public are beginning to feel that ours is not a trade, so much attendance for so much money. They are even inclined, some of them, to pat us on the back, and call us noble fellows, and other pleasing epithets of the same kind. But be on your guard! Much of this praise is false pretence, and given with the covert intention of trespassing upon your time and labor in an illegitimate manner. Medical men, they think, are animated by mixed motives. No doubt they are very kind and humane, and they are also ambitious and fond of success. Let us prey upon these feelings, say they; and put the care of all our sick, and poor, and miserable, upon their shoulders; and, to keep them well up to the collar, let us call them brutes, and unworthy of their noble calling, if they by chance neglect a sick pauper, or grumble to turn out and ride miles on a cold night to minister to the results of our own excesses. Be on your guard, I repeat, against these illegitimate encroachments, and exactions of all sorts of kind offices which you are not called upon by duty or charity to render. Beware! Remember that fine saying of Tacitus, so terse, so true to human nature: "Nam beneficia eo usque læta sunt,dum videntur exsolvi posse; sed cum eo multum antevenire, pro gratia odium redditur." Obligations may reach so great a height that no return is possible When thanks avail not, there is no relief but through base ingratitude. Be not, therefore, the too trusted friend, carrying in your bosom the dread secrets of the family; or the performer, at a pinch, of some hateful service. The sight of you will continually touch the sore, and the first opportunity will be availed to get rid of you, and so to gain relief, after the manner so well described by Tacitus, from an intolerable burden of gratitude. But this by way of parenthesis.

I think I have established our claim to two great Christian virtues,viz., true liberty, and charity, or love. I myself refuse to look upon our duties as medical men except by the light of Christianity. That, we know, gave us true liberty, setting us free from the bondage of pagan priestcraft and superstition. That, we know, first instilled into the heart of man true charity; the love of our neighbor as ourselves; "which does good by stealth, and blushes to find it same."

What then remains to complete the Christian triad? Is it not truth? Truth to nature; truth to ourselves; truth to our brethren; and to the world? Are our studies and researches carried on in the sincere desire to attain the truth, and the truth alone? Is our teaching animated by the same principle, and by nothing else? Are our practice and our intercourse with the world regulated by the all-sufficient motto, "Let truth prevail, though the heavens fall?" If we all could answer these questions by a bold and honest "Yes," I should have no fear but that our profession will, in time, arrive at that high pinnacle of usefulness and exalted public appreciation which two great men have foretold for it. It was no less a man than Descartes who foretold that a great future was in store for us. All science, and almost all knowledge, was to be drawn upon to furnish the physician's mind, and then he said, "all things would be open to him." No less a man than Lord Beaconsfield uttered nearly the same idea. If, therefore, these far-seeing men presaged such things for us if the light of truth were consistently followed, what a failure must it be if truth be lost sight of! If this great light that is in us be turned to darkness, how great indeed must that darkness be!

If theories be pushed to an extravagant degree in order to bolster up some preconceived idea; if researches, which should be conducted only under the dry light of truth, be warped and strained to support a trembling reputation, truth must suffer.

The acquisition of knowledge, under any motive whatever, is undoubtedly a clear gain to the world. Nevertheless, it is the motive which actuates that acquisition which gives the entire value to it, so far as the individual is concerned. And unless knowledge be sought for, at least in the first instance, from the pure love of truth, its reflected advantages may indeed contribute to the material prosperity of its cultivator, but they will add nothing to his character, not obtain for him the respect of his fellows.

Is it not from losing sight of this canon of intellectual morality, if I may use the term, that so-called discoveries and improvements in practice are so often given to the world in such haste, under the worthy desire to be the first to promulgate something new, whether true or not, that no well balanced mind will venture to accept them until they have been examined again and again by trustworthy observers? And this mischief is increased ten-fold, when the public lay press is made use of to propagate plausible theories, which to say the least, want the support of long continued observation and experience. Until this has been gained, publication should be restricted to the professional press.

I have great hopes that this evil—an ever increasing one—will be counteracted, and that the motives which prompt to too hasty publication of discoveries which are rather hoped for than believed in, will be corrected by that new element in the operations of our Association, the prosecution of knowledge by combined observation, the resuscitation of which we owe to our eminent and honored ex-President, Professor Humphry. By the co-operation of a number of observers, errors which may have escaped the notice of one will be pointed out and corrected by another. Thus hasty conclusions—and worse, hasty publications—will be checked; and truth, when substantiated by the impartial judgment of many observers, will present itself to the world with an *imprimatur* which must carry conviction to every mind. Priority, instead of being selfishly sought after by each, will thus become the property of all in friendly brotherhood.

And now, coming to the practical application of our knowledge, if I mention one or two black spots, shall I require to apologize? I proposed, at the outset of this second head of my discourse, to inquire into the condition of the medical mind, and to mark its tendency and aims. Why not follow this out? This Association, at all events, should have clean hands. We are no longer young; we are grown men, and as such should not be afraid to look our affairs and our conduct in the face, nor ashamed, if we find ourselves going along the wrong road, or diverging into by-paths, to try to recover our way as speedily as possible.

No doubt, the spirit of our age tends towards a general *laissez faire;* allowing everyone to follow the direction of his own mental bias, or even whim, whether the project be theory or practice. But there must be a right and a wrong road, a right and a wrong method, in all intellectual and moral action. It is the province of sound and mature judgment to weigh all methods in the balance of right reason, and if any be found to sin against its canons, to reject them utterly. Truth, being many-sided, cannot be confined within fanciful bounds and narrow specialties. The scientific mind must be perfectly free and open, not enslaved by reverence for a name, or by predetermined dogmas.

Nor can there be any real fellowship between honest truth and consciously pursued error; for independently of contradiction of belief, the lines they severally work upon diverge until they no longer touch at any point. To agree to differ, therefore, is not enough; there must be utter repudiation, the one of the other.

And then, in regard to practice, are not the same faults to be discerned? Are there not in in our ranks those who conduct their practice under what I may call an organized hypocrisy—men who assure one class of their patients or dupes of the hope of cure when cure is impossible, and given up by all honest men; who assure another class of the existence of serious maladies which no one else can see, and treat them for months or years for ailments which do not exist, or, existing, are of no importance; whilst guinea after guinea is extracted without mercy, or regard for the means of the patient, or to the real services rendered? By these vile arts the character of a noble profession is dragged in the dust, and fraud, detected in the guise of science, hangs her disgraced head.

So, then, we see that liberty, overstepping its legitimate bounds, degenerates into license; so charity and philanthropy, put on to answer a selfish purpose, become that hateful thing hypocrisy; so truth departed from or smothered in sophistry, becomes that still more hateful thing, a lie!

But these faults, which we all deplore, and which strict devotion to duty compels me to notice, are not all of home growth, generated within our profession. Some of them owe their origin and progress to the caprices, the follies, and the ignorance of our patients and the laity in general. We are living in days when, if ever it were true, it is pre-eminently true now, that "a little knowledge is a dangerous thing." The general public have arrived at a little knowledge of things medical, and they like to take them very much into their own hands They think that they know how to nurse and manage the sick quite as well as, if not better than, we do—a knowledge sometimes put in practice to their own cost. The public also think that they can manage our hospitals, asylums, etc., better than we can, as is frequently shown by the desire to have as little of the medical element as possible on their managing committees, and by the jealousy of even our legitimate and beneficial share in their counsels. Many of them also believe that they are better judges of the talents and capabilities of various medical men than we are ourselves, as witness their freaks and follies in the matter of consultations, and in the choice of consultees, in which they often prefer the guidance of popular rumor, or even that of the advertising columns of a newspaper, to the advice of their regular and trustworthy attendant. It would be laughable, were it not lamentable, when the issues of life and death are concerned, to hear the reasons which often guide our patients in seeking what they call "further advice." One wretched form which this assumption of independence of judgment takes is the resort to advertising quacks, not only those without, but also those within the profession. Once in the hands of these men, he who has thus exercised his right of private judgment does not come forth thence until ruined health and an empty purse teach him, too late, the folly of judging where the materials for forming a judgment are altogether wanting. And then, as regards consultants, do we not recognize a solemn farce when Mr. A., or Mrs. B., returns from consulting, say, some metropolitan celebrity, and tells us that Dr. C. has laid down all the rules for his or her future life, and indicated this or that health-resort as essential to recovery; and all in ten minutes' time, and for a fee of one guinea? The issues of life and death, in the case of a stranger never seen before, solved in a ten or fifteen minutes' interview and all for one guinea! Why, a lawyer would take six weeks to do the same amount of work, and charge a bill of fifty pounds. Such practices on the part of the public must needs tend to relax the morals, and to sap the strict integrity of professional men, The reasons for consulting this or that physician are often so grotesque, and the inability to discern between real merit and pretentious ignorance is so great, that the vices to which I have referred are petted and fostered until self interest carries the day against professional honor and honesty. So true is it that *populus vult decipi, et decipiatur*, which may be translated, the public likes to be bequacked, and bequacked it will be.

If the foregoing observations be founded in truth, I think we may justly conclude that our profession, at the present moment, is still faithful in general to the great and true maxims upon which the British Medical Association was founded. The bounds of science are continually being enlarged; the search after truth never ceases; the application of fresh knowledge to the relief of human suffering is immediate. But there are blemishes—some of them, it must be confessed, of a serious character—which prevent the universal application of our fundamental maxims, and which, if they do not lower our profession in the esteem of the wise and judicious few, at all events prevent it from assuming that high position in public esteem which Descartes and Lord Beaconsfield pointed out as the goal to which we might attain.—*Brit. Med. Jour.*

INSANITY FROM MEASLES, BY M. J. MADIGAN, M.D., BROOKLYN, N. Y., FORMERLY ASSISTANT PHYSICIAN, NEW YORK CITY ASYLUM FOR THE INSANE, WARD'S ISLAND.

The relation between the various acute diseases and insanity has been much discussed of late, and the attention of general practitioners has been called to the types of insanity resulting from the various exanthemata.

Among the contributions of especial value in this connection may be mentioned those of Krapelin,[1] Rinecker,[2] Cheron,[3] Thore,[4] Griesinger,[5] Spitzka,[6] Bucknill, and Tuke,[7] Burman,[8] Skae,[9] Luys and Kiernan.[10]

These types of insanity have much in common, and it is to one of them to which I desire to direct attention. Frequent as measles is, it yields so generally to treatment, or rather the patient, as a rule, recovers so rapidly, that to its sequelæ or complications too little attention is paid. I have, while an interne in the Ward's Island asylum, seen several cases of insanity due to measles. The acute types of these were exceptional, and, for obvious reasons, the mental alienation was too brief to require asylum sequestration. The psychic symptoms often develop themselves after a sudden fall of temperature, occasionally during extreme pyrexia. The patients manifest hallucinations of sight and hearing. They see disagreeable sights or hear disagreeable sounds. The delusions, if such exist, are of dread and persecution. Of this type the following case may be cited:

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[1] Archiv fur Psychiatrie, Band, xi.
[2] Zeitschrift fur Psychiatrie, Band, xxix.
[3] Ibid, Band, xxiv.
[4] Annales Medico Psychologiques, 1850–56.
[5] Mental Pathology and Therapeutics.
[6] Somatic Aetiology of Insanity.
[7] Psychological Medicine.
[8] Cited by Luys.
[9] Cited by Bucknill and Tuke.
[10] Journal of Nervous and Mental Disease, 1881–82.

R. K.. aged 22, single; no ancestral history obtainable. Has always been inclined to "nervousness." Was perfectly well up to two days before coming under observa tion, when he was attacked by what was thought to be a severe cold, which was soon followed by high fever and the measles eruption. In twenty-four hours the temperature of the patient suddenly sank and he began to complain that his sister had poisoned him. He heard at times, and chiefly on rising in bed, voices denouncing her crimes. On recovering from the measles all these symptoms disappeared.

Another type of cases are those where, after an attack of what appears to be encephalitis, the patient is attacked by dementia. There were in the New York asylum two cases which gave the following history:

Case I: T. O.; 26; single; father epileptic; mother has chorea. The patient had been a bright, healthy boy up to the age of sixteen, when he was attacked by measles. During the entire bronchial symptoms he coughed violently and immediately complained of a violent pain in the head. For three days thereafter he was delirious. He recovered, apparently, from this delirium; that is, he became quiet and peaceable but was completely demented, having lost all knowledge of both recent and past events, and was unable to carry on an extended conversation. In this condition he remained when I left the asylum.

Case III. H. P.. aged I6; single; father died of apoplexy; mother epileptic. This patient had been healthy up to the age of twelve, when he was attacked by measles. During the progress of the disease otitis-media occurred, and subsequent to this the patient gave evidence of meningitis. When he had fully recovered from these symptoms he was found to be a complete dement.

One case giving a similar, but more imperfect history, had remained for six years in the asylum and then began to manifest symptoms of progressive paresis. Another case became demented, and after three years epileptic. Fom these cases I think we conclude:

First: Measles does give rise to certain types of insanity.

Second: These types vary from a melancholia, with frenzy, to a dementia.

Third: The patient attacked by melancholia with frenzy usually recovers. The dementia is a permanent affection.

Fourth: These latter cases may be ultimately complicated by paresis and epilepsy.

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ECLECTIC DEPARTMENT.

"Carpere et colligere."

Remarks on the Treatment of Gunshot Wounds of the Abdomen in Relation to Modern Peritoneal Surgery, By J. Marion Sims, M. D., LL.D., etc.

Occasionally wounds of the abdomen above the brim of the pelvis recover; but it is always when there is a chance for drainage. Dr. Pallen saw a Confederate soldier recover, where a large part of the abdominal parietes were blown off by a bursting shell. The wound was immense, and diagonally across the abdomen. The bowels fell on the ground, but were not wounded. They were washed clean, returned to their proper place, and the wound was closed as well as possible with strong coarse thread, leaving an open space six inches long and two inches wide, through which the intestines could be seen. They were retained *in situ* by compress and bandage, and the man eventually recovered without a single drawback. He recovered because the intestines were not injured, and because there was drainage. This was a case in which we might have supposed there was danger of peritonitis ; but peritonitis and free drainage are antagonistic.

Dr. Newell, of New Brunswick, New Jersey, reports to me the following interesting case : A large man, with a "full abdomen," shot himself accidentally with a shot-gun in 1847. The charge entered the abdomen an inch below the sternum, and to the left of the median line. Introducing the finger, Dr. Newell plainly felt the left lobe of the liver and the inner wall of the abdomen. The next day twenty-nine shot passed the bowels. Three shot made their exit one inch and a half above the crest of the ilium, and three and a half inches above the spine. "An incision was made here into the cavity of the abdomen, and I removed the gun-wad, composed of tow, paper, shot, a printer's type and a piece of the man's vest—in all, sufficient to fill a tumbler half full. The patient was kept under the influence of opium for several days. He recovered completely and is now living." In this case Dr. Newell did, thirty-four years ago, what I now advise to be done in all cases of gun-shot wounds of the abdominal cavity. His patient was saved by the removal of foreign bodies, and by an opening in the iliac region, which permitted free drainage.

Having now brought forward all the facts observed by myself and by personal friends, let us turn to the records of the American Civil War for further facts illustrating this important question.

1. *Wounds of the Stomach.*—There were sixty-four shot wounds of the stomach, more or less complicated with wounds of neighboring parts. There was but one well authenticated case of recovery. Other reported cases of recovery were carefully analyzed by Otis, and pronounced wholly unreliable.

There were nine cases of bayonet wounds penetrating the peritoneal cavity without lesion of viscera. Six terminated favorably. Seven had traumatic peritonitis. The diagnoses were not clear in every case.

There were four fatal punctured or incised wonnds of the stomach. Five fatal shot wounds are reported as having survived seven, eight and nine days, and one forty days. The length of time that these survived indicates clearly how different the result might have been in some of them, if prompt measures had been taken for exploring the seat and nature of the wound, and resorting to gastrorrhaphy, the only rational treatment in such cases. There was not a single case of gastrorrhaphy, during the whole war. This is explained by the fact that the stomach does not prolapse through an ordinary bullet wound; and surgeons did not then dare to enlarge such wounds to investigate the nature and extent of internal injuries.

There were three cases of secondary fistulæ, which terminated fatally. One lived four weeks, another seven weeks, and the third eighty days. Timely interference and gastrorrhaphy would almost certainly have saved all of them.

Considering the facility and comparative safety with which gastric fistulæ are now established by surgical means, it is a little surprising that (according to Otis) we have the record of but two cases which have survived shot wounds of the stomach for any length of time. The first "is that of Maillot, wounded in Mollendorf's repulse of the French at Kaiserslautern, in May, 1794. In this little known, but authentic case, recorded by Baron Percy, the fistulæ gradually contracted, and ultimately closed." The other is the well known case of Alexis St. Martin, made famous by Beaumont, who, nearly fifty years ago (1833) published an account of the digestibility of various articles of diet as observed in the stomach of St. Martin. Beaumont states that St. Martin, a Canadian, of French parentage, was about eighteen years old when wounded (June 6, 1822) at Fort Mackinaw, where Dr. Beaumont was stationed as surgeon to the post. As St. Martin died only a few months ago, he survived injury about fifty-nine years.

Dr. Otis sums up wounds of the stomach

in the following words : There were "four fatal punctured or incised wounds; one incontestable recovery from a shot perforation; a few recoveries from shot wounds in the gastric region, in which the diagnoses were not determined unequivocally; and nearly sixty fatal cases of more or less complicated shot-wounds of the stomach."

The records of military surgery (according to Otis), from its earliest period to the present time, furnish but six or seven well-authenticated cases of recovery from shot-wounds of the stomach, with or without fistulæ. To this list must now be added another example of recovery from undoubted shot-wound of the stomach. It is the case of the distinguished gynæcologist, Dr. R. Beverly Cole, of San Francisco. I have just received a letter from him, dated London, January 17, 1882, detailing the following particulars : Dr. Beverly Cole, at the age of twenty-five, resided in San Francisco, where he had suffered from repeated attacks of intermittent fever. When just recovering from one of these, he left his house, on June 3, 1854, without taking breakfast; his stomach was therefore empty. Whilst in the act of packing his trunk, preparatory to making a visit to the country, a Colt's six-inch revolver (old pattern) fell from his inside breast coat pocket, the body being bent over the trunk at the time, and the hammer of the pistol striking the edge of the trunk as it fell, the cap was exploded, and the ball entered the breast—the muzzle not being more than eight inches from the body. He did not fall, but, raising himself up, he tore open his vest and shirt, and saw that he was wounded. Syncope occurring, a friend caught and laid him on a sofa near by. When consciousness returned, he found himself surrounded by a number of his medical friends, among whom were Drs. C. S. Tripler and H. S. Hewitt, of the United States army, and Drs. Valentine Mott, Jr., A. B. Stout and Charles Bertody. He was totally blind, but recognized them all by their voices. He heard Dr. Tripler say : "Never mind the ball; it can be sought for at any future time. We must first bring about reaction." Soon after this he was suddenly seized with an indescribable pressure in the rectum, and a desire to defæcate. Morphia was administered, sinapisms were applied to the extremities, and ammonia was given in very minute quantities—minute, for fear of its escaping through the gastric wound into the peritoneal cavity. As reaction came on, the sensation in the rectum increased till he vomited nearly a wash-hand bowlful of blood black and partially coagulated. If was estimated by the attending physicians to be from a quart to a half-gallon, or more. This gave some relief. But the rectal pain and tenesmus were not completely relieved till he was brought fully under the influence of morphia. As he lay on his back, his clothing was all cut away without turning him on either side, and he was then placed in bed. The collapse was very complete, and several hours elapsed before reaction was fully established. During all this time he could not see; but from the conversation of the surgeons and from the frequency with which they examined the cardiac region, he inferred that death was imminent. The sinapisms were forgotten, and were not removed for four or five hours, and they produced sloughing ulcers, which were nearly twelve months in healing. When reaction was fully established, Dr. Tripler passed the end of the little finger along the track of the ball, through the conjoined cartilages of the seventh and eighth ribs—an inch and a half to the left of the median line of the ensiform cartilage. He then passed a probe along into the stomach. The lodgment of the ball was not discovered for two weeks or more later. It was then found between the eleventh and twelfth ribs, on the back, two inches to the left of the median line. This showed that the course of the ball was directly through the body—the difference between the parallels of entrance and exit being due to the difference between the bent and the erect posture.

For three weeks he was nourished by the rectum. Beef-tea was thus given every three hours; at first one ounce, then two, then three, and finally four ounces. During this time a small quantity of beef tea was given by the mouth, but it produced such severe pain, as it entered the stomach, that it was not soon repeated. Small lumps of ice were allowed to quench the thirst produced by the morphia, which was given in half grain doses three or four times a day, or whenever needed. On the twelfth day the bowels were moved by enema. On the twenty-first he was removed to his own home. He then began to suffer from severe paroxysms of pain in the back, which were so intense as to obstruct respiration. They continued without abatement for three weeks. Dr. Tripler then removed the ball, and they ceased. He was confined to bed six weeks. When he got up it was discoverey that the left shoulder was lower than the right, the result of a constrained position while in bed; and there was a dragging sensation in the gastric region, not only disagreeable, but quite painful, as if the stomach had formed unnatural adhesions. On account of these disabilities, he was compelled to go on crutches for two years before his body attained its natural erect manner of carriage.

The posterior wound closed in a few days after the removal of the ball; but the anterior wound did not close for four years, which was doubtless due to the injury of the cartilages, which are always tardy in reparation. For many years an ordinarily hearty meal (in consequence of adhesions between the stomach and contiguous parts) produced a dragging, uneasy sensation, which rendered life very uncomfortable.

Recovery was eventually complete; and no one would suspect that he had ever been the subject of such a serious accident. A peculiar feature of the case was total loss of vision for three days, during which time he could not distinguish daylight. There can be no doubt that the ball in this case perforated the stomach. The large quantity of blood vomited soon after the wounding establishes the diagnosis beyond question. From the point of entrance and direction of the ball, it must have passed through the stomach, below the lesser curvature. As the ball was very small, the wound of the stomach was likewise very small; hence there was less probability of gastric effusion than if the ball had been larger. But recovery was chiefly due to the fact that the stomach was quite empty at the time of the accident. If it had been even partially full there would have been effusion into the peritoneal cavity, followed by certain death.

The history of Dr. Beverly Cole's case was published in the *Detroit Medical Journal* in 1855 or 1856, by Dr. C. S. Tripler, United States Army. But as Dr. Otis insinuated, in a note to the "Surgical History of the War" (Part II., "Surgery"), that the case was not incontestably one of the stomach, I place it on record here that others may judge for themselves.

2. *Wounds of Small Intestines.*—Of about six hundred and fifty cases of penetrating wounds during the war, fifty were of the small intestines, eighty-nine of the large intestines, and over five hundred in which the location of the wound was not discriminated, or was complicated with other lesions. Very few sword or bayonet wounds of the abdomen came under treatment, but a number of such injuries were observed among the slain on the field of battle. Wonnds of the small intestines are more frequent than those of other portions of the alimentary canal, and are attended with higher mortality. They are more exposed to injury, being less protected by bony structure than other viscera. The ileum is most exposed, jejunum less, and duodenum still less. Wounds of this portion of the canal are regarded as almost necessarily fatal. Of shot wounds of the small intestines during the war, Otis says: "It may still be doubted if an incontestable instance of recovery was observed." There were five cases of wounds of the duodenum, all complicated with wounds of other organs. They all died. One survived eight days; another twenty-four days. If the external wound had been sufficiently

enlarged in time the wounded portions might have been exsected, and the ends sutured, with chance of recovery.

3. *Wounds of the Large Intestines.*—Injuries of this group are less fatal than wounds of small intestines. There were a few instances of recovery from shot wounds of the transverse colon ; many after perforation of the cæcum and ascending portion of the bowel, and a still larger number in wounds of the sigmoid flexure and contiguous part of the descending colon. Many of these were complicated with injuries of the innominata. Nearly all resulted in fæcal fistulæ, which usually closed after a while without surgical interference. There were, in all, fifty-nine recoveries, out of eighty-nine shot wounds of the cæcal and sigmoid extremities of the large intestine. Fæcal fistulæ persisted in nine, and were closed in fifty ; seventeen within a month, twenty-eight within a year, and five at periods from one to five years. Ten per cent. of all slain in battle die of wounds of the abdomen, and from three to four per cent. of the wounded who come under treatment are wounded in the abdomen.

4. *Wounds of the Bladder.*—Baron Larrey was the first to show that gunshot wounds of the bladder were less dangerous than those made by puncture or incision ; because the tissues are so crushed by the missile that eschars are produced, which protect the connective tissues from urinary infiltration. There was no case of punctured, incised or lacerated wound of the bladder in our war. Of one hundred and eighty-three shot wounds of the bladder, eighty-seven (47.5 per cent.) survived. A large majority of these suffered from grave disabilities, and many from distressing infirmities, a few of them dying after years of suffering ; several recovered, with permanent urinary fistulæ. Some had recto-vesical fistulæ, which closed early in a few, and later in others. However, it is rare to find the functions of the bladder perfectly restored after shot injuries. Shot wounds of the bladder are often complicated by the presence of foreign substances in it—such as bullet, bone or other material—which serve as nuclei for calculous deposits. There were twenty-one cystotomies for the removal of such formations. Many cases died from infiltration of urine into the cellular tissue, and many from extravasation of urine into the peritoneal cavity. Cystorraphy, recommended by Legouest, was not practiced.

The teachings of Vincent, of Lyons, and of Fischer, of Buda-Pesth, at the late International Medical Congress, alluded to in the early part of this paper, prove that we may now safely undertake cystorraphy in all wounds of the bladder. Abdominal section, and cystorraphy, and clearing out thoroughly the peritoneal cavity, are the only means of safety in shot or other wounds of the bladder, where there is urinary extravasation into the peritoneum.

5. *Shot Wounds of the Rectum.*—One hundred and three shot wounds of the rectum were reported, of which forty-four (or 42.7 per cent.) resulted fatally. Thirty-four of the cases, of which four were fatal, were complicated with wounds of the bladder. Fæcal fistulæ, after shot perforation of the rectum, were not uncommon, and were more persistent than cæcal or sigmoid fistulæ. Shot wounds of the rectum are not so numerous as those of the upper bowels, but are about on a par with wounds of the cæcal and sigmoid ends of the colon. Hæmorrhage was not a frequent complication of shot wounds of the rectum.—*Brit. Med. Journal.*

CYSTITIS—DILATATION OF THE URETHRA.

By WILLIAM GOODELL, M.D., Professor of Clinical Gynæcology.

This patient, gentlemen, is thirty-one years of age, and has borne two children. Both labors were difficult, and delivery was accomplished by the use of instruments. Ever since her first labor she has had an irritable bladder, and her second labor made matters worse. The patient complains of frequent micturition, with burning pain; there is urinary tenesmus, and she passes bloody urine. For six months she has had a purulent leucorrhœa; she has a lacerated cervix, and complains of pain whenever the bladder is touched. She is still suckling the child. The urine has been examined, and contains albumen and pus. The albumen, however, betokens nothing grave, for it is not large in quantity, and is dependent on the presence of pus and blood.

This woman has passed through an energetic course of treatment, both local and constitutional, adapted to modify the condition of the urine, but she has found no relief. She says that she has to get up very often to pass water—every half-hour, according to her statement, but that I can hardly believe; were it every hour at night, that would be a great tax upon her strength. You know how difficult it is for a man to walk a thousand miles in as many hours; the broken rest, far more than the continued effort, is very exhausting to the whole system. In this woman's case, the strain of nursing, added to the loss of rest, is altogether too much for her.

Why did labor cause this cystitis? It is possible that, during delivery, the traction of the forceps was not made in the axis of the superior strait, or in that of the pelvic curve; but we cannot say that the instruments were improperly used. The slow passage of a large head bruised the neck of the bladder and the urethra; as a consequence, the parts became swollen, stenosis of the urethra occurred, and she had a stoppage of the urine. Not only this, but the walls of the bladder were paralyzed by pressure; the walls of the abdomen were weakened and tired out by bearing-down pains, and so the abdominal muscles, which you know are the best and most effectual to expel the urine—being, in point of fact, the true detrusor muscles—from sheer fatigue allowed her water to accumulate.

Often and often, after hard labors, women are not able to empty their bladders, and it is necessary to catheterize them. Young men, however, dislike to pass the catheter, and, like the ostrich sticking his head in the sand, they shut their eyes to the danger and say, "We'll wait awhile;" perhaps they leave it twenty-four or thirty-six hours, and often an incurable cystitis follows delay and timidity of this kind. Never have any hesitation about using a catheter; you can pass it along your finger, as I have described to you before, or, if you fail, boldly call for a light. A woman who has been pregnant once, and has had the walls of the bladder over-stretched after a tedious labor, by neglect of this precaution, is never the same woman again. When a patient of yours complains after labor that she wants to pass water and cannot do it, do not delay relief. If you practice in the country, and are perhaps four or five miles away from your patient, and apprehend any difficulty of this kind, you can insert a Skene-Goodman self-retaining catheter. By attaching it to a piece of tightly-fitting gum-tubing, and controlling the escape of urine by means of a clip, you can have her water drawn at stated intervals, without making a special journey for that purpose. A suppository containing one grain of the aqueous extract of opium and one-third of a grain of the extract of belladonna, and a broad poultice, placed over the bladder, you will find to afford your patient great comfort in acute cases of catarrh.

I shall now gently examine this woman's womb. As I touch the cervix, I find a tear on the right side, extending down to the junction of the vagina. There is also a laceration on the left side, but it is not so bad as the one on the right. There are evidences here of a previous inflammation; plastic matter has been thrown out, and the vagina seems to have lost its elasticity. I wish to see now if the uterus is pressing in any way on the bladder. I find it, however, in good position; neither the fundus nor the cervix is pressing upon that organ.

As I find no extrinsic cause for this irritable bladder, I am going to dilate the urethra. But I wish to do it with clean hands; I do not care to carry any vaginal discharges or other poison-germs into the bladder. So I shall use soap and a nail-brush.

The first thing to be done after the patient is completely etherized, is to pass in a uterine dilator—Ellinger's is a good one for this purpose—and gently stretch open the urethra, as I am doing. This mode of treating cystitis is a very successful one. It is, to be sure, not infallible, but succeeds in a large majority of cases. A case in which this operation failed—in fact, the worst case of cystitis I ever saw, was due to a single over-distention. The subject, a lady, had traveled a whole day in a stage-coach, and from motives of delicacy did not empty her bladder. By and by, on reaching her journey's end, she found that she could not pass her water, and had to call in a physician to draw it off. On that day troubles began which have lasted many years.

I think the most grateful man in the world is the man who has just been relieved by the catheter of over-distention of the bladder. So, on one occasion, a poor widow who had been relieved by me of an irritable bladder, insisted on giving me more than the amount of my bill.

I now withdraw the dilator and introduce my little finger, which is well-oiled. By a slight rotary motion I slowly pass it in.

I have often slightly torn the anterior margin of the meatus, and in one instance, quite a large amount of blood escaped. The patient came into my hands while she was pregnant. There was a slight rent of the meatus. I endeavored to stop the bleeding by a piece of absorbent cotton moistened with Monsel's solution, but no astringent that I applied seemed to be of any service, so I passed in a needle deep down to the bone, and closed up the wound by a stitch. In pregnancy all the veins in this portion of the body are enlarged and engorged, so that the slightest rent may encourage troublesome bleeding

There is some blood here; the urine is slightly tinged with blood. What has caused it? There has been a slight lateral tear. In my book I say that you can dilate to the size of your forefinger. Perhaps I shonld modify that statement. I have had, in one case, a loss of control of urine, but that is unusual. Now, my forefinger is of medium size. It is not large, nor yet is it particularly small. I think that if your index finger is of large size you had better not use it as a dilator, but limit yourself to your little finger. I once operated upon a lady whose physician, in dilating the urethra, had used his thumb, by means of which the part was over-stretched, and loss of control of the bladder followed.

I think that I have dilated the urethra sufficiently to introduce my forefinger. It goes in very easily, and will sufficiently stretch it. I am now able to feel the inner sufrace of the bladder, which is very much roughened by contraction. This bladder is a pus-secreting surface, and it is denuded of its epithelium at points. I can feel granulations. You should always take this opportunity to examine the bladder. Rest, washing, and cleanliness are all that is now required.—*Ex.*

IS CONCEPTION POSSIBLE AFTER DOUBLE OVARIOTOMY?—Dr. Boisliniere (*St. Louis Courier of Med.*, April, '82) says that he knew of three cases where conception and safe delivery had occurred after double ovariotomy. The Fallopian tubes, or one of them, may remain after the operation, and may be connected with a portion of the ovarian stroma also remaining, so that ovulation and menstruation may continue. It is said that each ovary contains 350,000 Graafian vesicles capable of becoming impregnated when they come to maturity, so that a woman with both ovaries contains enough possibilities to populate a city larger than this. It is not only the stroma that contains ova, but the ovigenic layer surrounding the stroma, and a part of this layer might be left after the operation of double ovariotomy and the Graäfian vesicles find their way thence into the Fallopian tube. Dr. Maughs had stated that he did not believe that he had removed all the ovarian tissue in his cases, and it was quite possible that Dr. Engelmann had not removed all the tissue, as he scooped it out with his hand. Then there was always the possibility of the presence of supernumerary ovaries. Of course if the Fallopian tubes were all removed entire, there would be no opportunity for the ova to enter the the uterus and conception would be impossible, unless the spermatozoids had reached the ovary through the duct of Gartner—this duct is always found in the sow, and occasionally in the human female.

Remarks on Cases in which the Whole or Part of the Placenta was Retained for a Longer Period than Usual after Delivery of the Child: Removal of the Retained Portion by Hand, with Remarks. By J. Braxton Hicks, M.D. Lond., F.R.S., F.R.C.P., etc., Obstetric-Physician and Lecturer at Guy's Hospital, etc.—*Lancet.*

The very important rule, of long standing that the placenta, if retained, should always be removed, is now, almost without exception, so implicitly followed, that its great value can scarcely be fully realized Certain conditions, however, do from time to time arise, where it is very difficult, and in some instances impossible, to follow this rule absolutely; and some cases occur in which there has been a difficulty in recognizing the fact, that either a fragment has remained behind, or a secondary lobule has been formed outside the area of the apparently normal placenta.

The circumstances which will prevent our removing the placenta, or portions of it, are either the firm closure of the uterus, or the firmness of the adhesion. It is generally in cases of premature expulsion of the fœtus that the uterus closes so firmly as to prevent our entering. Seldom it is in the fully developed organ that we are unable, at any rate with the assistance of chloroform, to pass our hand sufficiently far to empty the uterus. Besides these obstacles to the removal of the placenta, or portions of it, we may desist from immediately removing it in consequence of the condition of the patient: as, for instance, in a patient hovering between life and death from sudden or abrupt hæmorrhage already arrested. In cases where bleeding is still continuing, it would be unwisdom to wait, because the shock of operating will not affect the system so much as the loss; whereas, if the bleeding have been checked, besides saving the patient from the shock of handling, it will be an advantage to wait till the shock of the hæmorrhage has passed off, and the general balance of the circulation is restored, and the heart has received blood from the outlying smaller vessels of the extremities, etc.

A certain number of cases of retained portions or whole of the placenta having occurred to me, I have thought it may be useful to give a brief account of some of them, in order to show that, whenever the removal of the placenta is not carried out, a very proximate and positive danger is impending. I have not included cases of abortion before the fourth month; but in all cases, at all periods of pregnancy, I consider the rule above referred to holds good—namely, to endeavor to remove the portion of placenta retained. Yet, in abortions, if the os uteri have contracted rigidly, it may be wise to wait a day or two to see what nature may do; for I have seen the placenta expelled the day after vigorous, though ineffectual, attempts at removal had been made, and this, no doubt, is the experience of many practitioners; but, having also seen, not only severe and protracted hæmorrhages, but still worse, many times, fatal pyæmia follow on the detention of the secundines in both early and late abortions, I consider it safer by far if, after waiting a day or two without result, we pass a sponge-tent, or some form of dilator, and remove the adherent portion. After the fourth month or so, the os is more dilatable; and, generally speaking, we may enter two or more fingers, without much trouble, with or without dilatation. In all cases, greater facility is obtained by the assistance of an anæsthetic.

Most of the cases here related were attended by what has been called "secondary hæmorrhage;" and in all the cases of secondary hæmorrhage I have attended, two only were not owing to the presence of the whole or a portion of the placenta. These I have added at the end of this paper. And, again, in all the cases of retained placenta, offensive discharges were present, except in one. Hence, in cases of hæmorrhage occurring during the puerperal state, coupled with offensive discharges, we may expect to find a portion of placenta.

In cases indeed of sharp and severe hæmorrhage, without offensive discharge, it is safest to explore the uterus; and, even where the hæmorrhage is not severe, yet repeated and fresh, it will be best to explore; and if continued offensive discharges occur, with or without hæmorrhages, it is also well to explore the cavity of the uterus. We shall be the more urged to carry out this, if, in addition, we find the patient feverish.

If difficulty be found for the finger to reach the fundus, though this is more common in premature expulsion than in delivery at full term, I need hardly remind my hearers that the hand, placed on the uterus, above the pubis, will generally bring down the fundus on to the tips of the fingers, and every portion of the cavity will be brought thus within its reach.

One remarkable case of secondary hæmorrhage was told me by the medical attendant, where, at the first monthly period after delivery, so much hæmorrhage occurred, and such a relaxed state of the uterus was present, that he was able to pass his hand into the uterus and remove the clots which filled it to the size of "a seven months' conception." There was in this case no remnant of placenta.

In our endeavors to remove the placenta or its fragments, it is never wise to remove the hard nodules—the products of an effusion between the uterus and the serotina and extending amongst the villi—which are occasionally met with at the seat of the adhesion. It is better to gently detach all the healthier parts, and to bruise down with the finger tips all the softer portions between the nodules, and then to remove the loosened pieces, than to forcibly tear away the nodules or the firmly attached stems of the villi. If we leave these behind, they do not putrefy, but slowly disintegrate. It s best to wash out the uterus, after the above process, with either a weak solution of iron or with some disinfectant; and to repeat the latter every day for some days The danger is great if we remove the nodules; we shall probably pull off some portion of the uterine tissue, and a fatal hæmorrhage will be the probable result. I have seen such a case.

CASE I. *Retained Placenta; Death from Hæmorrhage Fifteen Hours Afterwards.*—This was a case attended by a most incompetent person, who permitted the placenta to remain in the uterus without any attempt to remove it. The patient had had a natural labor, but the placenta remained *in utero*, for what reason I could not find out —certainly it was not adherent. I was asked to see her twelve hours afterwards. She was nearly dead from loss of blood, which was still going on freely, and the discharges were already offensive. I passed my hand into the vagina, and without difficulty withdrew the placenta, which was still partially in the uterus. The placenta was quite offensive. She sank two or three hours afterwards.

CASE II. *Complete Adhesion of Placenta at Abortion at Four Months' Pregnancy: Retained a week: Secondary Hæmorrhage.*—I was asked to see a woman who had borne five children, who had between the fourth and fifth months' pregnancy, suddenly expelled the fœtus, followed by a rather sharp hæmorrhage. Her medical man attempted to remove the placenta, but he found it impossible from the closed state of the os. After much trial, he sent for me. I endeavored to pass one finger; but the passage was closed so firmly, that, even assisted by firm counter-pressure from above, I could not succeed. She objected to take chloroform; and, as hæmorrhage had ceased, it was agreed to wait, in hopes that the uterus might relax and expel the placenta. Six days had elapsed when I was suddenly summoned to her, a most violent hæmorrhage having occurred. I found her blanched, half collapsed, and torpid from anæmia. The os was more patent than before; I could pass one finger through and feel the placenta. I found it, however, as fixed as possible, very solid, and altogether tougher than normal. I could not detach it in the usual way. I could only make an impression on it by pressing the fundus down on to the tip of the finger inside the uterus, and then break it up by fretting it away bit by bit, till by the same manœuvre I had brought every portion of the inner surface into contact with the finger. This, of course, was a work of much time. The fragments were removed from the uterus. She recovered slowly from the anæmia, with some slight inflammation of the left femoral vein.

Case III. *Complete and most Firm but Simple Adhesion of Placenta, at Full Term in Four out of Five Labors: Recovery.*—A primipara patient of Guy's maternity was delivered of the child, but the placenta did not follow, and the student in charge not being able to manage the case, sent for me. Three hours had elapsed before I saw her, without, however, any hæmorrhage. I attempted removal, but found it impossible to distinguish the margin of the placenta from the uterine wall. Her surroundings not being favorable for treatment, I had her brought into the hospital. This was done; and, as no bleeding had occurred, I waited to see what nature would do, leaving instructions to send for me on the slightest occurrence of bleeding. About twenty-four hours afterwards, some slight uterine action occurred, and with it some loss of blood. I proceeded therefore to remove the placenta. Passing my hand to remove it in the usual way, I found the same difficulty of distinguishing the margin in every direction. I therefore pushed my finger through the center of the placenta till I arrived at the uterine wall, the distinction there being plain enough. Starting from this, I separated the placenta till I arrived at the margin, which then was not very difficult to separate. I found the membranes very firmly adherent, but detached them by care. But little bleeding occurred during the removal. She recovered well afterwards. She came into the hospital to be delivered at her next labor. The same condition existed, but was not quite so severe. At the third labor she was again admitted, and so much hæmorrhage occurred that I thought she would die before I could remove the placenta, which was adherent as before. On the removal, however, the bleeding ceased. At the fourth labor there was but little trouble; but the fifth was similar to the first in character. Neither upon the placentæ nor their fragments was any sign of inflammatory change to be perceived, nor could any nodules be felt on the uterine surface at the time of their removal, nor any sign of inflammation of the chorion. It appears to me that the condition which gave us so much trouble was an imperfection of the natural process, by which the decidual membranes are shed from the uterine surface and fixed on the ovular membranes. This seemed retarded, and equivalent to the condition of two or three months' pregnancy.

Case IV. *Secondary Hæmorrhage: Adherent Placenta: Portion of Placenta Remaining after Removal of Greater Part: Recovery.*—I was asked to see a lady, delivered twenty-four hours; a constant and free blood-loss had continued ever since, and her medical attendant was anxious lest there were a portion of placenta remaining in the uterus. The labor, he said, was a languid one, and when the child was born the uterus did not contract well, the placenta remaining within it. Friction, etc., were employed, but hæmorrhage was the only response. He therefore proceeded to remove the placenta, but found it adherent in part, and that part in the upper chamber of an hour-glass contraction. He thought that he had removed all, and put the parts together afterwards, and at the time believed the placenta complete. This, however, was an error, for I found on examination a large mass, partly clot, partly placenta, filling the vagina and passing up into the uterus, and adherent some distance within the os, which expanded to three or four inches. I peeled this off with some difficulty, the patient straining down much, and helping in the expulsion of a large mass of the size of two fists. On further examination, I found a long and firm fragment. Passing into the still existing upper chamber and following it up, I ascertained that it was attached to the high point of the fundus. It was with some difficulty separated, but pressing the fundus down from above the pubes gave much help to the finger within. The hæmorrhage at once ceased, and the patient felt much easier afterwards, for there had been much urging and backache, and condition of distress. I had found before removal of the portion the uterus very high, being pushed up by the mass which was in the os and vagina, As far as I could make out, the placenta had been diseased; the serotinal surface was yellow and thickened, and parts were firm and consolidated to some depth; but, as clots of very recent date infiltrated it irregularly, it was difficult to say what amount of effusion had existed.

CASE V. *Labor at Seventh Month: Almost Fatal Hæmorrhage immediately afterwards. Placenta universally and very firmly adherent allowed to remain for two days: Irritative Fever: Removal: Recovery.*— The wife of a medical man suddenly miscarried at the seventh month. On the instant of the delivery of the fœtus, a most alarming hæmorrhage occurred; she was nearly dead. Her husband tried to remove the placenta: but, finding it universally and firmly adherent, he thought it best to desist from removing it, considering her pulseless condition, especially as the bleeding had ceased by this time. A medical friend was sent for, who, arriving some hours later, thought it best to wait for a little more recovery. Next day, no fresh symptoms had occurred; but, toward the thirtieth hour, the discharge began to be offensive, and the pulse and temperature rose. I was sent for; it was thirty miles from London and six from any town, and late at night. I had no intimation as to the nature of the case; consequently, I had no suitable instruments, nor possibility of getting any. I found that no further bleeding had occurred, but the discharge was quite offensive; the pulse 130 per minute; the temperature 105°; the tongue brown; and the mind wandering. There could be now no doubt as to what was occurring, nor any as to what should be done. She was therefore placed under chloroform. Passing my hand into the vagina, and two fingers through the os, which would not dilate for the whole hand, I found the placenta most firmly adherent, and it was impossible to remove it by the finger. The only forceps I could find was a long weak pair, used for tents; and guided by the finger, by torsion movements, bit by bit I removed the whole, much assisted by pressure externally on the fundus—thus bringing every portion of the uterine surface within range of the finger and forceps. It required much time; but only a few nodules and stems of villi were left. No bleeding occurred during the operation. It was very interesting to note that, before four hours had elapsed, the pulse had dropped to 100 per minute; the temperature to 101°; and the mind was clear. She rapidly lost all anxious symptoms, and made a recovery much better than might have been expected. The anæmia, however, remained for a long time; and indeed now, about eight years after, is still apparent. There was also amenorrhœa for two or three years, very slowly passing away. But she is sterile. The uterus was about the usual size.

CASE VI. *Adherent Placenta: Half removed at first, the remainder six hours afterwards, under chloroform: Recovery.*— My advice and assistance were sought by a *days after Delivery: Portion of Placenta* medical friend, in respect of a case of labor where, after the birth of the child, the placenta was retained. He had attempted its removal, passing the hand into the uterus. He had with much difficulty removed about half, but it was very firmly adherent, and the patient was very restive; so that, without chloroform, he felt he could not complete the removal of the rest. He thereupon desisted and asked my help. It was about six hours after delivery that we got the patient under chloroform. There had been a little hæmorrhage during the interval, but it was increasing, with some pain. I found half the placenta adherent to the upper part of the uterus, covered by a clot at its lower part. I had the greatest difficulty in detaching the portion; it was very dense next to the uterine surface, to which it adhered, and nodules of inflammatory products were left behind, as also some of the stems of the villi; all the softer parts of the villi were bruised down and removed, and the uterus was cleared of all the *débris*. No hæmorrhage of any moment occurred during the manipulation, nor any afterwards. She recovered without the slightest check, as indeed after an ordinary labor.

CASE VII. *Secondary Hæmorrhage, seven days after Delivery at full Term: Portion of Placenta retained: Removal of it: Recovery.*—Mrs. —— was delivered naturally, and apparently the placenta had come away whole. About seven days afterwards, however, a rather severe hæmorrhage took place, repeating itself three or four times in a week, till she was much reduced. Offensive discharge had by this time occurred, and irritative fever also. Being asked to see her, I found the os uteri somewhat patent; and felt a mass, about the size of a small orange, firmly attached to the interior of the uterus. Assisted by external pressure, I removed with the finger the mass; after which the bleeding ceased, and the fever gradually subsided. For some months, however, there was chronic metritis.

CASE VIII. *Secondary Hæmorrhage a week after Labor: Portion of Placenta retained: Removal: Death.*—Mrs. ——, multipara, was delivered naturally; afterwards the discharges were offensive, and there was irritative fever. About a week afterwards, she was seized with severe flooding, which, coupled with the febrile condition, brought her into a very low state. I was asked to see her; and, on examination, found a mass, of the size of a small orange, firmly adherent to the uterine walls. The os uteri being open, I readily removed it with the finger. The bleeding ceased; but she never rallied, dying in a typhoid state a few days later.

CASE IX. *Secondary Hæmorrhage, five days after Delivery: Portion of Placenta retained: Removal of it: Recovery.*—Mrs B., multipara, about five days after a natural delivery, had severe loss of blood from the uterus. But before this there were irritative fever, and pains in the lower abdomen. I found cellulitis and a bulky uterus; and, through the open os, discovered a mass of placenta, about the size of an orange, attached within. This was peeled off with some little difficulty, owing to its firm attachment and to the cellulitis. After the removal, she had no further loss of blood. This was fortunate, as she had already become extremely anæmic, and reduced by feverishness. She made a very slow recovery; with some subsequent suppuration, I believe.

CASE X. *Secondary Hæmorrhage, a week after Delivery: Portion of Placenta retained: Removal: Recovery.*—Mrs. ——, multipara, had been delivered naturally, Some oozing of blood had occurred, more than normal, after a few days. But shortly this became so severe that she was very reduced in strength; besides this, there was much fever. The discharges were offensive. She looked pale and haggard. I found, through the patient's os uteri, a portion of placenta still attached to the uterus. This was not difficult to remove; and she gradually recovered.

CASE XI. *Secondary Hæmorrhage, six retained: Removal: Recovery.*—Mrs. ——, multipara, had a natural labor, excepting that the discharges became offensive. Six days afterwards, she was seized with a violent uterine hæmorrhage; which continuing, a second medical man was sent for, who said that there was nothing particular. I was then asked to see her. I advised his passing a sponge-tent, in advance of my visit, as he told me the os was closed. This he did. I found the uterus retroverted; the tent had well opened the os, and through it I detected a mass of adherent placenta, of the size of a Tangerine orange. This I peeled off. The hæmorrhage ceased, and she made a good recovery.

CASE XII. *Secondary hæmorrhage after Delivery at Full Term: Portion of Placenta retained: Removal: Death from Low Fever.*—Mrs. ——, multipara, a delicate woman, was delivered naturally Everything proceeded well till a week after delivery, when a most violent hæmorrhage occurred, and I was called to see her. The bleeding had stopped, but she was extremely blanched, and scarcely able to be touched. It was with great difficulty I could examine her, without her falling into a condition of collapse. I, however, found the os uteri closed, but the uterus was rather large. No offensive discharge had been present. There was no loss going on, and I recommended her to be left for a time till she had rallied, but that, if bleeding recurred, the os was to be plugged with a sponge tent, and exploration made. There was no bleeding or offensive discharge afterwards, but now and then light oozing of watery blood. However, about five days after the flooding, slight pains came on, and I found the os patent, and a flood of placenta within. I abstracted this without difficulty by the assistance of an ovum-forceps, and all oozing ceased. However, slight feverishness came, and she gradually fell into a "typhoid" condition, and died about three weeks after delivery. The pulse was 120 all the time through, but there was no increase of temperature till the last week.

CASE XIII. *Secondary Hæmorrhage after Abortion: Retention of Portion of Placenta: Removal: Recovery:* Mrs. R., multipara, had apparently expelled a four month's ovum. All went on well for five or six days, when a lage loss of blood occurred. As it continued, I was asked to see her. I found the os uteri patent, but the uterus retroflexed. I passed my finger within, pushing up at same time the fundus, with another in the vagina. I detected a mass about the size of a Tangerine orange. With a little management it was removed, and she made a good recovery.

This case is a sample of a large number, such as doubtless occur in every large private and consultant practice, the condition of flexion being a potent factor in the retention. In contrast to the foregoing cases, it may be useful to note two cases of secondary hæmorrhage, one of which was fatal, without retention of a portion of placenta.

CASE XIV. *Secondary Hæmorrhage a Week after Delivery: Retroflexion of Uterus: Death from loss of Blood.*—Mrs.——, an Irish woman, aged about 30, healthy, had a natural labor at full term. There had been some more than usual loss of blood a few days afterwards; but at about a week later a very severe attack completely blanched her, and rendered her unable to move in bed. On examining, I found a uterus by no means bulky for the time, but deeply retroflexed, packed tight into Douglas's pouch. I pushed it up; it went up with a jerk, without my using much force. It remained up, and the bleeding entirely ceased. But she never rallied, and, lingering on for a few days, died from the anæmia.

CASE XV. *Secondary Hæmorrhage a Week after Labor from Mental Excitement: Recovery:*—This patient had been delivered naturally. On the tenth day after she was suddenly exposed to mental excitement. She had been sitting up some days. Suddenly a severe uterine hæmorrhage came on, and I was called to her. It then had ceased, except slight oozing. I found the uterus rather bulky and spongy; but no further trouble arose. She was kept horizontal and quiet some time afterwards.

Of course, it is possible that in these last two cases there may have been some portion of placenta remaining, but there was no evidence of it. In the first I think it was scarcely possible, with so small a uterus.

PROTOPLASM — A COMPLICATED SUBSTANCE.—H. J. Rienke (*Botan. Zeitung*, 38, No. 48) has examined protoplasm obtained from *Æthalium septicum*, and discovered in it the following proximate constituents: Plastin (an insoluble albuminoid resembling the fibrins), vitellin, myosin, pepton, peptonoid, pepsin, nuclein, lecithin, guanin, sarcin, xanthin, ammonium carbonate, paracholesterin, traces of cholesterin, Æthalium resin, a yellow pigment, glycogen, sugar (non-reductive), oleic, stearic, palmitic, and traces of butyric acids, carbonic acid, fatty glycerides and paracholesterides, calcium stearate, palmitate, oleate, lactate, oxalate, acetate, formiate, phosphate, carbonate, sulphate (traces), magnesium (probably phosphate), potassium phosphate, sodium chloride, iron (compound not determined), and water. Plastin can be separated by pressure from the liquid portions of protoplasm. The albuminoids collectively scarcely amount to 30 per cent. of the dry substance. Hence the supposition that protoplasm consists of albumen must be abandoned, and we must cease to compare a plasma cell with a particle of white of egg.

NOTE ON THE ANTISEPTIC TREATMENT OF PHTHISIS.—By J. BURNEY YEO, M.D.

Since the delivery of my lecture, which was published in the JOURNAL of July 1st, my attention has been directed to some very recent reports, published in Germany, bearing on the antiseptic treatment of phthisis. Dr. Frankel (*Centralblatt*, June 10th) has been making experimental injections of antiseptics into the pulmonary tissues of animals such as carbolic acid, boracic acid, iodoform, tartrate of alumina, etc.

These injections were not attended with any constitutional disturbance; and the *post mortem* examinations showed the existence of extravasations and simple inflammatory changes in the lungs; and, in later stages, the formation of cicatricial tissue. On the strength of these results, he proposes that similar injections should be made into the foci of disease and their neighborhood, with the view of modifying the morbid process, and of limiting its extension by cicatricial barriers.

In a patient with fœtid expectoration, he administered six injections, each of fifty minims of a five per cent. solution of carbolic acid. It excited no reaction and no cough, but had no effect on the expectoration. I mention these experiments without, for the present, offering any opinion as to their value, merely to show the activity with which this subject is being investigated in Germany.

It will also, doubtless, interest the readers of the *British Medical Journal* to hear that Professor Oertel, of Munich, in a volume he has just published on the *Therapeutics of the Organs of Respiration*, devotes just about 350 pages to the subject of "Inhalations"; in which he speaks highly of the use of a five per cent. solution of benzoate of soda, atomized—*i. e.*, inhaled in the form of fine spray. He has observed a very cleansing effect to follow its use in the ulcerative lesions of laryngeal phthisis; and he infers, from this, that a similar favorable action may be exercised on the lesions of more deeply seated parts: on the bronchial ulcerations and softenings, and on the walls of cavities. The expectoration is facilitated—increased at first, and subsequently diminished. Mycotic processes and decomposition of the secretions are arrested; and the absortion of secretions is thus favorably modified, and is less likely to be pyrogenic or specifically infective. He also points to the importance of thorough cleansing of the mouth and fauces; the appetite is thereby improved, and the stomach is spared the infliction of decomposing oral secretions. The swallowing of a certain amount of the solution he considers of great value, as he believes it operates in diminishing the fever. He duly discredits the marvellous results claimed for this plan of treatment by Rokitansky; but sees no reason to deny the correctness of Schiller's impressions, as to the results of his experiments on animals, performed under conditions very different from those obtaining in the subjects of advanced phthisis. He, moreover, expresses a confident belief that, by this and other antiseptic modes of inhalation, very good effects will be attainable.—*Ibid.*

TUBERCULAR INOCULATION.—The question of the relation of the tubercular disease in the domestic animals, particularly in cattle, to the causation of consumption in the human family, which has been so frequently adverted to in these columns of late, in connection with important European discoveries respecting the contagiousness of tubercle and the mode of its communication from one animal to another, bids fair, if the latest reports of such journals as the *Gazette des Hopitaux* may be credited, to find a decisive answer at an early moment. In Germany a commission of experts, of whom the celebrated Verchow is one, has already been appointed to investigate the subject fully, and that indefatiguable worker has issued a brief preliminary report; while it is now agitated in the Paris Academy of Medicine to follow in the wake of German inquiry, and to institute a similar commission composed of the ablest members of that body, and empowered to call in consultation the best veterinary experts in France. In England, the attention of Dr. Simon, whose thorough reports to the Privy Council on the causation of the disease in Great Britain have constituted, each in its way, a landmark in the literature of public medicine, has been especially directed to this aspect of the inquiry upon which he and his medical adjutants, Dr. Burdon Sanderson, Dr. Creighton, and others have been so long engaged. Among the curious experiments that the discussion of the subjects has called forth, is one by two Greek physicians which will long remain memorable in the annals of medicine, no less by reason of its boldness than in consequence of its doubtful morality. It represents the only attempt on record to settle the question whether the disease as it occurs in the inferior animals can be communicated to man by direct inoculation of the latter with tuberculous matter. The subject of the experiment was a common laborer, who, in consequence of arterial occlusion, was slowly perishing from progressive gangrene of the leg, the destructive process commencing with the great toe, and creeping toward the trunk by slow gradations, engendering pyæmia, and insuring certain death from that cause. In other respects the patient was healthy, and a careful examination showed that the lungs were in normal condition. As he refused to submit to the amputation of the limb, pronounced necessary to save his life, on the ground that death is preferable to pauperism, his medical attendants decided to test by direct experiment whether tubercle can be propagated from phthisical cows to man by inoculation. A quantity of tuberculous matter was accordingly injected into the circulation, whether with or without consent is not specified. The man lived about six weeks and then died of the blood-poisoning inseparable from progressive gangrene. The autopsy disclosed the existence of well-defined tuberculous deposits, without abscess or other disease of the pulmonary organs, very small, evidently very recent, and, as the daring experimentalists argued, the direct result of the inoculation. It is not probable that German enthusiasm or Gallic brilliancy and precision will venture to repeat this experiment of the two Greek professors, except, possibly, in the person of some member of the commission, willing to imperil his own life to settle a question that has assumed the highest scientific standing, independent of its practical sanitary relations; but it may be anticipated with confidence that, with a commission of German scientists, another composed of the most brilliant luminaries in France, and with such tireless workers as Simon in England, all engaged in pushing a single and really very simple inquiry, the question will be settled in Europe before its vast importance is adequately understood by American practitioners, and while yet the American Medical Association is engaged in vain disputation on points of medical ethics.—*Times.*

GUNSHOT WOUND OF ABDOMEN TREATED BY OPENING CAVITY AND SUTURING INTESTINES.

Read before the South Carolina State Medical Association by R. A. KINLOCH, M. D., Professor of Surgery Medical College State of South Carolina —Charleston.

Amos Ray, colored male adult, admitted into city hospital, November 1st, 1882, P. M., with gunshot wound of abdomen. Wound received about 10 A. M., from discharge of pistol (32 calibre, Colt's) in hand of a fellow laborer with whom there had occurred a difficulty. The party firing was in front of Ray at the time and only distant some five paces. Patient had been brought to hospital a distance of several miles.

Examination.—The orifice of entrance of ball was found midway between the umbilicus and pubes, a little to the left of the mesian line. There was general abdominal pain, and an inability to pass water,* with symptoms of slight shock. The bladder was emptied by a catheter, and the urine found of natural character; a little blood escaped from the urethra, which was sensitive and slightly strictured at two points.

At 7:30 P. M., Dr. Kinloch examined patient.† Abdomen was slightly swollen and tender, and in addition there was complaint of pain at end of spinal column just above the anus. The oiled-finger passed into the rectum discovered an orifice through the posterior wall of the gut, and this corresponded with a depression in the bony tissue of extreme end of the sacrum. Dr. Kinloch determined upon an operation as offering the best chance for life under the very gloomy prognosis. At 9 P. M., the necessary preparations having been completed patient was chloroformed and the operation performed under carbolic spray and with full antiseptic precaution. The cavity was opened by an incision in the median line from the umbilicus nearly to the pubes. The intestines were turned out, and carefully examined.

There were discovered five preparations in the calibre of the small gut, and two in the mesentery. The wound in the rectum, after very careful examination, could not be discovered. The edges of all the intestinal wounds were trimmed with the scissors, and the wounds closed with fine carbolized silk sutures (suture of Lembert.)

There was considerable blood in the cavity and but very little fecal matter. The cavity was carefully sponged out, and cleansed with a warm two per cent. carbolized solution. The abdominal wound was closed with silver sutures except at the lower angle where a rubber drainage tube was inserted. Carbolized oiled lint, several layers of borated absorbent cotton, and a broad bandage completed the dressing.

Patient was ordered gr. 1 of opium every four hours. Hot bottles to extremities. Internally nothing more than pellets of ice *ad libitum.*

Nov. 2d, 9 A. M. Patient in good spirits, has no pain but is troubled with hiccough. Pulse strong, 116. Temperature 100.2.° Removed dressing and sponged off abdomen with carbolized water. Removed drainage tube, and inserted one of larger calibre. Washed out cavity with a warm two per cent. solution of salicylic acid. Reapplied dressing to wound, ordered opium to be given every three hours.

12 A. M. Condition unchanged. Patient asked for nourishment. Allowed a spoonful of milk and lime-water every hour.

6 P. M. Changed for the worse. Abdo-

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*NOTE.—Was this paralysis of the bladder following this kind of wound, according to the views of Baudens, Legouest, and Hamilton, or a mere sympathetic retention?

† The report of this case is taken from the Hospital Record Book.

men very tympanitic. Pulse 128, and weak. Temperature 100.2°. Washed out cavity again.

11 P. M. Patient sinking. Pulse 170, and scarcely perceptible. Temperature 100.2°. Extremities cold and surface generally bathed in cold sweat.

2:15 P. M. Patient expired.

Nov. 3, A. M. Autopsy revealed the fact that the mesentery and omentum had five perforations, and the intestines four, two or three were orifices of entrance and two of exit. All the openings but one were closed; this apparently had escaped detection. The ball had passed downwards and slightly to the right, entering the rectum just below the recto-vesical fold, and traversing the sacro-coccygeal articulation, scaling off a piece of the sacrum and imbedding itself in the glutei muscles from whence it was extracted. There was a very little fecal matter in the abdominal cavity, together with some bloody serum. The whole mass of the small intestines exhibited signs of acute inflammation, and here and there presented ecchymotic patches.

Remarks.—My postion in regard to the question of treatment of abdominal wounds has been long since recorded, when reporting the case of W B., successfully operated upon, during the war, in the July number of the *American Journal of Med. Sciences*, for 1867.

This question, too, has been thoroughly examined by the late lamented Dr. Otis, U. S. A., in the surgical history of the war.

More recently, Dr. Hunter McGuire, of Richmond, and Dr. Marion Sims, of New York, have given to the profession valuable papers in connection with the subject.

In the case now presented, it will be seen that the diagnosis of intestinal wound was fully established before operation, as was also the direction, course and position of the ball.

There was no need to discover fecal exudation through the wound of the abdominal parietes to determine a diagnosis of intestinal lesion. Beyond a doubt the fact was fixed that the case was not one of those remarkable instances said to have occasionally occurred, in which a ball had traversed the abdominal cavity and not wounded any of the viscera.

This, in part at least, decided me in my resolve to adopt the active or "heroic" practice, which has the sanction of Heisten, Fallopius, Cheselden, Baudens, Legouest, Pirogoff and Lohmyer in Europe, and Hewitt, McGuire, Lincoln, Billings, Sims and a few others in our country.

While this adds another fatal case to the list of those in which similar treatment has been instituted, it does not alter my belief in the correctness of the practice in the class of injuries presenting so gloomy a prognosis. Though I cannot feel as hopeful in regard to the future of such practice, as my distinguished friend, Dr. Sims, nor partake of that degree of enthusiasm which comes of successes in ovariotomy, I do look forward to better results than have been so far obtained. There is, strictly, no ground for comparing ovariotomy with the operations for intestinal lesions, unless it be in contrasting the conditions in the two proceedings to determine at once how much more serious must ever be the prognosis in the latter. Listerism, however, and much of knowledge acquired by ovariotomists will embolden many surgeons, who up to this time have favored the passive policy in the treatment of intestinal wounds. We shall soon have evidence of this, and fuller statistics upon which to base conclusions.

From the report above, it will be seen that the autopsy disclosed the fact that one of the perforations in the intestine was overlooked at the time of operation. This has occurred before in at least one reported case, and such an accident is a strong argument with many who are opposed to the active treatment. This failure to close one of the wounds would, with most surgeons, be regarded as a fatal mistake—one that would always seal the fate of the patient.

I think this by no means a legitimate conclusion. Where drainage can be insured, and the cavity washed out, such a calamity, fearful though it be, may at times be successfully prevented.

My failure to find the wound in the rectum, which I knew to exist, was a sad disappointment to me, but I looked for help to the drainage tube. But for this failure I should have closed the cavity.

I do not think that open wound of the intestine determined the fatal result. The autopsy proved that there had been but little escape of intestinal matter into the cavity, or that such discharges had been washed out by the injections thrown into the cavity.

Death, apparently, was neither from peritonitis nor septicæmia. The little suffering of the patient after the operation was a marked feature. The opening of the abdominal cavity seemed to save from suffering, if it did not save life. The lateness of the operation (eleven hours after injury) militated against its success, and the numerous perforations of the gut perhaps rendered success impossible.—*S. C. Trans.*

True Disinfectants. — Many a so-called disinfectant is employed to-day in a certain solution, when it does not possess any value whatever, under the circumstances. If it-is really our intention to disinfect wounds, we must be certain, at least, that we will achieve our object with the remedy we use ; if such is not the case, we only irritate without doing good.

The Imperial Board of Health of Berlin has published a number of experiments which have been made by Dr. Koch, with the view of establishing the real value of many so-called disinfectants. It would lead us too for to give the whole procedure employed to ascertain the facts mentioned, and we will, therefore, confine ourselves to giving the more important results of the investigations of this celebrated physician.

Most surgeons have been satisfied to wash their hands and to clean their instruments with a two per cent solution of carbolic acid. Such a solution is almost inert, and a five per cent solution is necessary to achieve the desired object.

But what is the most interesting is the fact that *carbolic acid dissolved in oil or water proved itself totally inert!* What do our surgeons who still make use of so-called carbolized oil say to that? Koch found that carbolic acid, when dissolved in oil or in alcohol, had not the slightest influence on the vitality of any ot the micrococci or bacilli.

Concerning sulphurous acid, it was found to be powerless against spores ; bacilli and micrococci, when exposed to the fumes in a box, were killed within twenty minutes, but were very little influenced, or not all, when exposed to the fumes in a room at the usual temperature.

Chloride of zinc showed itself just as harmless. A five per cent solution exerted absolutely no influence on the spores of anthrax, notwithstanding the same had been exposed to the action of the remedy for a period of thirty days.

Of other drugs, the spores of the bacilli were killed by chlorine water, fresh prepared ; two per cent bromine water, one per cent aqueous solution of corrosive sublimate, five per cent solution of permanganate of potassium, one per cent osmic acid, within one day ; formic acid, four days ; ol. terebinth, five days ; solution of chloride of iron, four days ; one per cent arsenious acid, one per cent quinine (water with muriatic acid), two per cent muriatic acid, within ten days ; ether within thirty days.

Inert or possessing very little influence: distilled water, alcohol, glycerine, oil, sulphur-carbon, chloroform, benzol, petroleum-ether, ammonia, concentrated solution of common salt, bromide and iodide of common salt, bromide and iodide of potassium, 1 per cent sulphuric acid, sulphate of zinc and copper, alum, 1 per cent permang. of potash, chromic acid, the chromates and bichromates, chlorate of potash 5 per cent, boracic acid 5 per cent acetic acid 5 per cent, tannic acid 5 per cent, benzoate of sodium 5 per cent, quinine

(2 per cent, in water 40, alcohol 60, iodine) (1 per cent in alcohol), thymol (5 per cent in alcohol), salicylic acid (per cent in alcohol, 2 per cent in oil.)

As regards remedies which prevent the further development of spores, the following results were obtained. The first number means retarding the developmement, the rest totally preventing it :

Corrosive sublimate,	1 : 1,600.000	1 : 320,000
Oil of sinapis,	1 : 330,000	1 : 33,000
Arsenite of potash,	1 : 100,000	1 : 10,000
Thymol,	1 : 80,000	
Ol. terebinth,	1 : 75,000	
Hydrocyanic acid,	1 : 40,000	1 : 8,000
Oil of peppermint,	1 : 33,000	
Chromic acid,	1 : 10,000	1 : 5,000
Picric acid,	1 : 10,000	1 : 5,000
Iodine,	1 : 5.000	
Salicylic acid,	1 : 3.300	1 : 1,500
Permang. of pot.,	1 : 3,000	
Muriatic acid,	1 : 2,500	1 : 1,700
Camphor,	1 : 2,500	
Eucalyptol,	1 : 2,500	
Benzoic acid,	1 : 2,000	
Borax,	1 : 2,000	1 : 700
Carbolic acid,	1 : 1,250	2 : 300

But as, for purposes of disinfection, the micro-organism must be killed, and in the shortest possible period, and the effect of retarding the development of the spores (antiseptic) is not sufficient, only the following remedies can, according to Koch's experiments, be said to be of value : corro sive sublimate, chlorine, bromine, iodine. Bromine in form of vapor is, as concerns rapidity of action, superior to chlorine and iodine.—*Medical and Surgical Reporter.*

AIR PUMPS, FLIES, AND GLUE.—It is all very well for the Positivists and other contemners of Christianity to tell us that we must have faith in science, but how can we have faith in it when it is constantly confessing its own mistakes? If there is anything with which science ought to be perfectly familiar it is flies. The average scientific person is bald-headed, and such are the chosen victims of flies. When occupied with his microscope or blackboard the scientific person affords a field of activity to flies which they never fail to improve, and since they know all about scientific persons, and can distinguish the taste of a mathematician from the flavor of a philosopher, we have a right to suppose that scientific persons have, as a result, a thorough and accurate knowledge of flies. In fact, they have always claimed to possess such knowledge. They have written elaborate text-books on flies, dividing them into a dozen different species—such as the blue-bottle fly, the up-stairs fly, the dinner-table fly, and the early morning fly, etc. They have told us all about the habits of flies, and one scientific person has invented an instrument with which, as he pretends, he can hear the footsteps of flies when walking and the deafening sound made by them when trumpeting through their probosces. We have believed all these assertions, but now comes a German scientific person—Prof. Deintz—and alleges that a great mistake has been made in point of flies, and that we must abandon as untenable one of the most pleasing peculiarities hitherto attributed to flies.

We have always been told that the fly is enabled to walk on the ceiling by reason of the air pumps with which he is provided. He was said to carry an air pump in each hand—or foot, and, by exhausting the air from under the soles of his feet with those pumps, to be able to fasten himself to the ceiling by atmospheric pressure. This was a beautiful theory. and it was often referred to in illustration of the intelligence of flies and of the wisdom of nature in making ceilings horizontal, and smooth enough to afford opportunities for the use of these air pumps. We were told that we ought to imitate the wisdom and forethought of flies, and to provide ourselves with air pumps so that we too could walk on ceilings; and we were warned not to be proud of our steam engines and bicycles when an insect as small as the fly could "lay over us"—to use a scientific term—in connection with air pumps. And now we are told by Prof. Deintz that the fly has no air pumps and never had any, and that no fly ever dreamed of walking on the ceiling with his pumps.

Of course, Prof. Deintz has a theory of his own. It is that every fly carries a quantity of Spaulding's or Peter Cooper's Prepared Glue with him, by the help of which he sticks his feet fast to the ceiling or to the wall, and walks safely where, were it not for the glue, he would be totally unable to walk. This is, in the Professor's opionion, an admirable theory, but a little examination will show that it is utterly untenable.

Let us suppose that a fly, intending to climb up a smooth and perpendicular surface—a mirror for example—glues two of his fore feet to it, and then pulled his hind feet after him glues them also to the mirror. So far his exploit has been an easy one—providing his glue is of a good quality. But now, if he intends to pursue his journey, he must lift his fore feet and glue them to the mirror at a point just above his head. How is he to do this? If the glue is strong enough to keep him in position in spite of the weight of his body, it is so strong that he cannot wrench his feet loose from the mirror without a tremendous effort. Even if we grant that he can loosen his feet by sheer muscular force, it must take some time to do this and to glue himself fast to a new place. That a fly should be able to run under such circumstances is simply preposterous. It would take a fly of average strength fifteen minutes to creep over a foot of perpendicular mirror, and two or three hours to cross the ceiling of a large room. We all know that flies can run as rapidly across the ceiling as they can across a table. The fact completely overthrows the theory that they use glue in the manner described by Prof. Deintz, and leaves us without any answer whatever to to the question. How do flies walk on the ceiling?

Fortunately, it is not difficult, by inventng a new theory, to answer this question. The proboscis of the fly is a wonderfully strong weapon, ending in a diamond-pointed drill. with this he can make a hole in the hardest substance with a single blow. Of course, the hole is too small to be seen by the human eye, but if the fly makes the hole with his proboscis it must be there whether we can see it or not. The instant the hole is made the fly inserts one foot in it and pulls himself up or along, as the case may be, while he makes a new hole with his proboscis. The system is precisely like that in use among the Alpine mountaineers, who climb perpendicular walls of ice by cutting holes with an axe and inserting their hands and feet in the holes. A fly's proboscis is comparatively a vastly more efficient tool than the Alpine climber's axe, and he wields it with such rapidity that he is able to move over a perfectly smooth surface at the rate of eleven feet per second, while making the holes at distance of one-quarter of an inch apart.

There is not the slightest proof of the truth of this theory, but there was not the least proof of the truth of the air pump theory which scientific persons compelled us to believe for nearly a hundred years. The ease with which this latter theory has been thrown aside shows us that we can place no sort of confidence in science, since it is liable to change its mind concerning flies at any moment, and since what it does in regard to flies it may do in regard to any other subject.—*N. Y. Times.*

The Systematic Treatment of Aggravated Hysteria and Certain Allied Forms of Neurasthenic Disease.

Being an Introduction to a discussion in the Medical Section of the British Medical Association at Worcester, on August 9th, 1882. By W. S. Playfair, M.D., F.R.C.P., Professor of Obstetric Medicine at King's College, and Physician for the diseases of Women and Children at King's College Hospital.

Gentlemen:—When your President did me the honor of asking me to open a discussion on the Systematic Treatment of Hysterical and Neurasthenic Diseases, to which I had already drawn the attention of the profession in a series of papers in the *Lancet* in May, June, and November of last year, I suggested to him that he should endeavor to persuade Dr. Weir Mitchell, of Philadelphia, whose method I had adopted and carried into practice, to undertake himself the task he had proposed to me. I much regret, for your sakes, gentlemen, that Dr. Mitchell was unable to accept your President's invitation, for I am sure that it would have been most interesting and profitable to have heard from that distinguished physician an exposition of his views on a matter of such great practical moment. Until I had actually put into practice Dr. Mitchell's method, I, in common, I am sure, with the vast majority of his profession, looked upon the distressing and unhappily common cases we are about to discuss as a very *opprobrium medicinæ*. Nothing could possibly be more hopeless than the experience of all of us of these wretched instances of broken and shattered lives, these bedridden, helpless creatures, who became a burden not only to themselves but to all around them, making happy homes miserable, and exhausting at once the patience, and the resources of those who are responsible for their care. Who is there amongst us who cannot point to some typical example of this kind, in which the patient at least, after every sort of treatment and drug has been used; after not one, but twenty doctors have been consulted; after every method, orthodox and heterodox, has been used in vain, has been allowed to drift into this hopeless state to which I have alluded, from pure despair of alleviating her sufferings, which are none the less real because we are satisfied that they are purely functional, and are not associated with any definite organic disease. To teach us how to lift such cases from the slough into which they had fallen is no slight achievement; and I may say, without exaggeration, that, having paid great attention to this subject for the last eighteen months, I have not only acquired a daily increasing confidence in the value of Weir Mitchell's method, but have had more satisfactory and surprising results from it than I have ever before witnessed in any branch of my professional experience, and that I now more confidently undertake the care of a well-selected case of this kind, than I do of almost any malady that comes under my charge. The reason for this confidence and this success is, I think, not far to seek. We have to do with cases which are, to a great extent, psychological in origin. Heretofore, although all well instructed physicians recognized this fact, they have not been in the habit of trusting to methods of treatment which were based on a scientific conception of the nature of the disease. In default of other means, recourse has been had to a useless system of drugging with the so-called nervine tonics, while the patient has been left to the unaltered morbid influence of the psychological causes, which, in nine cases out of ten, have so large a share in the production of the illness. Although the grave forms of hysterical disease we are considering differ from each other in endless variations, the peculiarities of each requiring most careful study, there is scarcely a single one of them in which unhealthy mental influences do not play a most important part, if not in causing, certainly in keeping up the disease. The injudicious and constant nursing, the craving for sympathy, the fact that the sick-room becomes the centre of interest for the patient and her friends, the constant discussion of feelings and symptoms, all have a most marked and prejudicial effect; and so long as these continue in operation no course of medicine or treatment, however judicious, has any reasonable prospect of success. As I shall presently show, the complete and perfect isolation of the patient from these unhealthy conditions forms the very foundation and essence of the systematic management of these cases, and when once this has been accomplished, an enormous leverage has been obtained for the successful application of other methods of cure. I do not propose to occupy your time with any long description of the forms and symptoms of hysterical disease to which the treatment is applicable, or to their pathology. No study could be more interesting, but the time at my disposal is altogether insufficient for such a task. I shall, therefore, content myself with a very brief outline sketch of the typical instances of neurasthenic disease in which systematic treatment is of most use, and follow this by an equally short sketch of what that treatment consists. And I must beg my hearers to remember that I cannot enter into any but the most elementary details of both these topics, for a fuller account of which I must refer them to the writings of Weir Mitchell, and Goodell, as well as to my own former papers I may say here that while the latter were entitled, "The Systematic Treatment of Nerve Prostration and Hysteria Connected with Uterine Disease," this was chiefly because my attention was first directed to the subject in consequence of the frequent association of these states with disease of the reproductive organs in the female. It would be a great mistake, however, to conclude that there is any necessary or constant connection between the two. Indeed, although very frequently the nerve-state has originated in connection with uterine disease, in a large proportion of the cases I have seen, it has completely overshadowed the originating local disorder. I am not sure that I should not, in common honesty, make the somewhat humiliating confession that in many instances over much and injudicious local treatment has, in my opinion, at least intensified, and kept up the now dominating neurasthenic disorder, as in a case under my care as I write, in which the patient may fairly be said to be suffering from pessary on the brain—so incessantly is she thinking of one or other of the seventy-nine different instruments which she has had inserted in the last few years in America and in this country.

It is, perhaps, superfluous to recall to your minds the extremely varying and complex forms of the neurasthenic diseases, which may be fairly classed under the heading I have selected for this communication. Still I think it likely that it is only those medical men who have paid special attention to this subject, and who have had opportunities of watching cases of this description, that have properly realized how multiform, strange, and misleading these nervous diseases really are. As a matter of fact, probably no two cases are ever precisely alike, and every individual instance calls for the most careful and minute study, if we are to hope for a successful result in its management, not only of its physical symptoms, to make sure that we do not confound real but obscure organic lesion with simple functional disorder, but also of the special mental character of the patient, since much of our success must depend on a judicious reading of this, and on our tact in dealing with it. Anyone who attempts to treat such diseases without careful study of the psychological characteristics of each individual patient, will inevitably fail.

The type of case best adapted for systematic treatment is, in my experience, the worn and wasted, often bedridden woman, who has broken down, either from some sudden shock, such as grief, or money losses, or excessive mental and bodily strain. At first, perhaps, there may have been only a debility, constantly, however, on the increase, daily more and more yielded to, until at last all power of effort is lost, fostered, too often by injudicious sympathy, and the constant nursing of devoted relatives and friends. Coincident with this is the total loss of appetite, the profound anæmia, and the consequent wasting of the tissues, so characteristic of these cases. On the soil so prepared are often developed the graver protean forms of hysterical disease, such as paresis, or paralysis, vomiting, disorder of motion, hystero-epilepsies, and many others which constitute the despair of the physician, and which must be more or less familiar to all of you. Such, in endless variations, are the cases which those of you who have attempted to cure them by ordinary medication will, I am sure, admit to have given unsatisfactory results, and caused more disappointment than almost any other in your practice.

Now, the principal elements in the systematic management of these cases are:

1. The removal of the patient from unhealthy home-influences, and placing her at absolute rest;

2. The production of muscular waste, and the consequent possibility of assimilating food by what we have called "mechanical tonics;" viz., prolonged movement and massage of the mucles by a trained shampooer, and muscular contractions produced by electricity;

3. Supplying the waste so produced by regular and excessive feeding, so that the whole system, and the nervous system in particular, shall be nourished in spite of the patient.

On each of these I shall offer one or two brief observations.

1. The removal of the patient from her home surroundings, and her complete isolation in lodgings with only a nurse in attendance, is matter of paramount importance. This is a point on which I am most anxious to lay stress, since it is a great crux to the patient and her friends; and constant appeals are made to modify this, which I look upon as an absolute *sine qua non*. I attribute much of the success which I have been fortunate enough to obtain in my cases to a rigid adherence to this rule. In almost every instance of failure in the hands of others of which I have heard, some modification in this rule has been agreed to, in deference to the wishes of the friends; as, for example, treating the case in one room by herself in her own house, or in admitting the occasional visits of some relatives or friends. While, however, the patient is to be rigidly secluded, it is incumbent to secure the attendance of a judicious nurse, with sufficient intelligence and education to form an agreeable companion. To shut up a refined and intellectual woman for six weeks with a coarse-minded stupid nurse, can only lead to failure. I have had more difficulty in obtaining suitable nurses, sufficiently firm to ensure the directions being carried out, and yet not over-harsh and unsympathetic, than in any other part of the treatment. Whenever my case is not doing well, I instantly change the nurse—often with the happiest results. In addition to the isolation, the patient is put at once to bed, to secure absolute rest. In many cases, she is already bedridden; in others, there has been a weary protracted effort, and the complete repose is in itself a great gain and relief.

2. Under the second head comes systematic muscular movement, having for its object the production of tissue waste. This is administered by trained rubbers, and here again is a great practical difficulty. The so-called professional rubbers are, in my experience, worse than useless, and I have had to teach *de novo* a sufficient number of strong, muscular young women; and the aptitude for the work I find to be very far from common, since a very large proportion of those I have tried have turned out quite unsuited for it. I cannot attempt any description of this process. I need only say that it consists of a systematic and thorough kneading and movements of the whole muscular system for about three hours daily, the result of which at first is to produce great fatigue, and subsequently a pleasant sense of lassitude. Subsidiary to this is the use of the faradic current for about ten to twenty minutes, twice daily, by which all the muscles are thrown into strong contraction, and the cutaneous circulation is rendered excessively active. The two combined produce a large amount of muscular waste, which is supplied by excessive feeding: and, in consequence of the increased assimilation and improved nutrition, we have the enormous gain in weight and size which one sees in these cases, it being quite a common thing for a patient to put on from one to two stones in weight in the course of five or six weeks. The feeding, at regular intervals, constitutes a large part of the nurse's work. A first from three to five ounces of milk are given every few hours; and for the first few days the patient is kept on an exclusively milk diet. By this means dyspeptic symptoms are relieved, and the patient is pre-

pared for the assimilation of other food. This is added by degrees, *pari passu* with the production of muscular waste by massage, which is commenced on the third or fourth day. By about the tenth day the patient is shampooed for an hour and a half twice daily, and by this time she is always able to take an amount of food that would appear almost preposterous, did not one find by experience how perfectly it is assimilated, and how rapidly flesh is put on It is the usual thing for patients to take, when full diet is reached, in addition to two quarts of milk daily, three full meals-viz.—breakfast, consisting of a plate of port ridge and cream, fish or bacon, toast and tea, coffee, and cocoa; a luncheon, at 1 P. M., of fish, cutlets or joints, and a sweet, such as stewed fruit and cream, or a milky pudding; dinner, at 7 P. M., consisting of soup, fish, joint and sweets; and, in addition, a cup of raw meat soup at 7 A. M. and 11 P. M. It is really very rare to find the slightest inconvenience result from this apparently enormous dietary. Should there be an occasional attack of dyspepsia, it is at once relieved by keeping the patient for four and twenty hours on milk alone.

Such is a brief outline of the method to which I am here to direct your attention. As to the results, I have already published several remarkable illustrative cases, so that it is perhaps not necessary to do much more in this direction. I may say, on looking back at my cases, that the only ones with which I have any reason to be disappointed are those in which the primary selection has been bad; and in the few in which the results were not thoroughly satisfactory, I had doubts as to their suitability for the treatment, which I expressed beforehand. These include one case of chronic ovarian disease, and one of bad anteflexion with fibroid enlargement of the uterus, in both of which the local disease prevented any really beneficial results. In a third case, I had to stop the treatment in a week, in consequence of cardiac mischief; two others were cases of positive mental disease; and in one case there was true epilepsy. I have no doubt that any positive co-existent organic disease of this kind should be considered a contraindication. In my other cases, the results have been all that could be wished, and in many of them the patients have been restored to perfect health after having been helpless, bedridden invalids for years; in one case twenty-three without ever putting a foot to the ground, in others sixteen, nine, six, and so on. In two instances my patients were in such a state, that it was found absolutely impossible to move them except when anæsthetised; and they were brought to London by their medical men long distances under chloroform, in each case leaving in six weeks perfectly cured. I am not desirous of occupying your time by long details of cases, having already published several; but, as many of my hearers have probably not seen my former papers, I shall conclude by a short notice of some of my recent cases, which will illustrate the classes of disease in which this method is so useful; and I select them not only for their own interest, but because the uselessness of all ordinary treatment in such conditions is proved by the fact that I have with regard to each of them a list of their former medical attendants, amounting in one to no fewer than twenty-five in number, and including the names of many of the most eminent consultants in the country, of itself a sufficient proof that all that the most advanced medical knowledge and skill could do had been tried in vain.

CASE 1. On the 24th of April last, I was consulted on the case of a young lady from the North of England, suffering from intense hysterical vomiting. This had commenced six years previously, after severe mental strain. Latterly, she could keep nothing but a single mouthful of milk on her stomach, and this only when mixed with whiskey, so that in this way she was taking three to four glasses of spirit daily. She was terribly emaciated, weighing only 4st. 7lbs. Her mother wrote of her, "it is just five years last Christmas-day since she has ever retained a single meal. Her symptoms have been most distressing, and have resisted every kind of treatment. Her young life has been completely blighted, and I have long since given up her case as quite hopeless." The rapidity of the cure in this instance, was almost ludicrous. In three days after she was isolated, she was keeping down two quarts of milk, it is needless to say no longer with the aid of whiskey. In ten days she was eating with an enormous appetite, and in six weeks she left town weighing 7st. 8lbs., a gain of 3st. and 1lb., and has since remained quite well.

CASE II. The next case is illustrative of the evil effects of over much education and mental strain, in a clever girl of highly developed nervous organization. It was placed under my care by the advice of one of our most eminent metropolitan physicians, who had been seeing her frequently in consultation with her own medical attendant for several years, and besides him many other physicians, equally eminent, had been consulted. This young lady was seventeen years of age. At the age of fourteen, when working, she had suddenly broken down, got complete hysterical hemiplegia, and for four years had never been out of bed or moved either of her lower limbs. In addition, she had a loud barking cough, which could be heard all over the house, and which had resisted every kind of medication. No food could be taken beyond milk, and a biscuit, and an orange. This case was placed under my care as a sort of test, and I was particularly anxious that it should turn out well. As to the result, I need only say that, at the end of a month I drove her out in my carriage, dropped her at the top of the street in which she lived, and made her walk down to pay her parents a visit. She has since remained perfectly well. It was a curious and characteristic point that her cough, which had resisted for years all sorts of energetic treatment at home, entirely ceased forty-eight hours after she was removed, and was never again heard.

CASE III. The next instance is one out of many of the same sort I have had under my care, and is a typical example of the kind of case best suited for this treatment. In this, there was no definite illness, no simulated disease, as in the last lady, but a general and complete break down. Her medical man sent her to me with the following note. "She has all her life been an invalid, with no well-defined symptoms; sometimes headache and nausea; at others spinal irritability, giddiness, etc. In fact, she is a typical hysteric or neuralgic patient. She never stirs out of the house, or moves from her bed or sofa, eats next to nothing, and is never happy unless seeing a doctor, or taking physic." I found, as was to be expected, that this young lady was wasted to a skeleton. Her chief complaints were nausea, headache, backache, intense nervous depression, and timidity (so that she was unable to speak to a stranger), and absolute anorexia; skin dry and rough; menstruation irregular; entirely dependent on chloral morphia for sleep. She was twenty-nine years of age, and for nine oears had been entirely on her back. I need say no more about this case, than that it was as successful as the rest of the same type I have had to deal with, any one of which I might have selected as an illustration. In six weeks, she was walking about; in two months, she started on a sea-voyage with her nurse, with directions that she should be forced to mix as much as possible with the passengers, to overcome her dread of society. Only two days ago, she came to report herself to me, having traveled alone from the country by rail; and I positively did not at first recognize her—so different was the well-dressed, healthy-looking woman from the wretched invalid of a few months ago. She tells me that she now plays tennis, goes out to picnics and parties, and enjoys life like anyone else.

CASE IV. The last example with which I shall trespass on your patience, I am tempted to relate because it is one of the most remarkable instances of the strange and multiform phenomena which neurotic disease may present, which it has ever been my lot to witness. The case must be well known to many members of the profession, since there is scarcely a consultant of eminence in the metropolis who has not seen her during the sixteen years her illness has lasted, besides many of the leading practitioners in the numerous health-resorts she has visited in the vain hope of benefit. My first acquaintance with this case is somewhat curious. About two months before I was introduced to the patient, chancing to be walking along the esplanade at Brighton with a medical friend, my attention was directed to a remarkable party at which everyone was looking. The chief personage in it was a lady reclining at full length on a long couch, and being dragged along, looking the picture of misery, emaciated to the last degree, her head drawn back, almost in a state of opisthotonos, her hands and arms clenched and contracted, her eyes fixed and staring at the sky. There was something in the whole procession that struck me as being typical of hysteria, and I laughingly remarked, "I am sure I could cure that case if I could get her into my hands." All I could learn at the time was, that the patient came down to Brighton every autumn, and that my friend had seen her dragged along in the same way for ten or twelve years. On January 14th of this year, I was asked to meet my friend Dr. Behrend in consultation, and at once recognized the patient as the lady whom I had seen at Brighton. It would be tedious to relate all the neurotic symptoms this patient had exhibited since 1864, when she was first attacked with paralysis of the left arm. Among them—and I quote these from the full notes furnished by Dr. Behrend—were complete paraplegia, left hemiplegia, complete hysterical amaurosis, but from this she had recovered in 1868. For all these years she had been practically confined to her bed or couch, and had not passed urine spontaneously for sixteen years. Among other symptoms, I find noted, "awful suffering in spine, head, and eyes," requiring the use of chloral and morphia in large doses. "For many years she has had convulsive attacks of two distinct types, which are obviously of the character of hystero-epilepsy." The following are the brief notes of the condition in which I found her, which I made in my case-book on the day of my first visit. "I found the patient lying on an invalid couch, her left arm paralyzed and rigidly contracted, strapped to her body to keep it in position. She was groaning loudly at intervals of a few seconds, from severe pain in her back. When I attempted to shake her right hand, she begged me not to touch her, as it would throw her into a convulsion. She is said to have had epilepsy as a child. She has now many times daily, frequently as often as twice in an hour, both during the day and night, attacks of sudden and absolute unconsciousness, from which she recovers with general convulsive movements of the face and body. She had one of these during my visit, and it had the appearance of an epileptic paroxysm The left arm and both legs are paralyzed, devoid of sensation. She takes hardly any food, and is terribly emaciated. She is naturally a clever woman, highly educated, but, of late, her memory and intellectual powers are said to be failing."

It was determined that an attempt should be made to cure this case, and she was removed to the Home Hospital in Fitzroy Square. She was so ill, and shrieked and groaned so much on the first night of her admission, that next day I was told that no one in the house had been able to sleep; and I was informed that it would be impossible for her to remain. Between 3 P.M. and 11.30 P.M., she had had nine violent convulsive paroxysms of an epileptiform character, lasting, on an average, five minutes. At 11.30, she became absolutely unconscious, and remained so until 2.30 A.M., her attendant thinking she was dying. Next day, she was quieter, and from that time her progress was steady and uniform. On the fourth day, she passed urine spontaneously, and the catheter was never again used. In six weeks, she was out driving and walking; and within two months she went on a sea-voyage to the Cape, looking and feeling perfectly well. When there, her nurse, who accompanied her, had a severe illness, through which her ex-patient nursed her most assiduously. She has since remained, and is at this moment, in robust health, joining with pleasure in society. walking many miles daily, and without a trace of the illnesses which rendered her existence a burden to herself and her friends.

In conclusion, I may remark that it seems to me that the chief value of this systematic treatment, which is capable of producing such remarkable results, is, that it appeals, not to one, but many influences of a curative character. Everyone knew, in a vague sort of way, that if an hysterical patient be removed from her morbid surroundings, a great step towards cure is made. Few, however, took the trouble to carry this knowledge into practical action; and, when they did so, they relied on this alone, combined with moral suasion. Now, I am thoroughly convinced that very few cases of hysteria can be preached into health. Judicious moral management can do much; but I believe that very few hysterical women are conscious impostors; and the great efficacy of the Weir Mitchell method seems to me to depend on the combination of agencies which, by restoring to a healthy state a weakened and diseased nervous system, cures the patient in spite of herself.

Dr Clifford Allbutt said that the reason why he had asked Dr. Playfair to open the discussion was, that he had been very much struck by the case, to which Dr. Playfair had not referred, of a lady he had sent to him from Yorkshire, a few months ago. Her removal was said to be impossible, and she could only be taken away under chloroform and swung in a hammock. He could add his testimony to the cure that was effected in that case, and certainly it was of the most astonishing kind. She was a lady of very high culture, and not an hysterical patient of the ordinary kind. She was a person of great mental control, and there was no morbidness about her, and her case was one of a purely physical neurasthenia. She had been ill for an indefinite period, was perfectly helpless, and her life was perhaps more a misery to herself than to anybody about her. But she was cured in about six or eight weeks, then went on a sea-voyage and was now perfectly well. He also saw a case which put him in a very difficult position, not very long ago. He was asked by the Midland Railway Company to see a lady who had been in a railway accident, and was in a state of hystero-epilepsy. It was absurd to say she was an impostor, but, mindful of these cases, he was obliged to go into the witness-box and say that she could be well in six or eight weeks. It was a strong step to take, and subjected him at the time to a great deal of unfavorable criticism. He did not know whether or not her friends had subjected her to this plan of treatment. With regardto the excessive dietary, he said that a rough observation had been made, with the result of showing that there certainly was no great quantity of undigested material or overflowing luxus of consumption, so that the cure was not entirely a mental one, but was distinctly also a physical, as he supposed Dr. Playfair meant to point out. Finally, he had had one or two cases of male patients, and he should like to ask Dr. Playfair if he had any; also whether he did not think that in some other cases attended with a great defective nutrition, and where there was some degree of organic disease, possibly some amount of malnutrition threatening phthisis, the treatment might not be in some degree extended.

Dr. Ross (Manchester) bore testimony to the value of the treatment under discussion. He laid stress upon the necessity of complete separation of the patient from her friends, and the selection of a suitable nurse. He believed that, although Dr. Mitchell's treatment was possibly not new in the sense that its separate recommendations were now made for the first time, it was new in the sense that these recommendations were, for the first time, combined so as to form a complete scheme of treatment.

Mr. D. De Berdt Hovell (London) said that if Dr. Playfair had proved anything, he had proved the absurdity of the term hysteria. Mr. Hovell had for the last twenty years been fighting against the one-eyed pathology which referred all these cases to the uterus and ovaries. No doubt these organs necessasarily became involved; but to regard them as the cause was not only to miscall the disease, but to misdirect the treatment. All cases were caused by some circumstances; depressing nerve-power, physical shock, a moral shock, and very frequently disappointment. Want of power and susceptibility to irritation were essential conditions of this state, and in many cases recovery was slow because the recuperative power was low. There was also great feeling of helplessness, which was misinterpreted into craving for sympathy. Many patients eventually lapsed into paralysis, or rather paresis. Mr. Hovell was of opinion that the sympathetic system was involved in this disease. He also thought that the condition of exhaustive debility explained the great capacity for food which some patients showed in recovery.

Dr. Myrtle (Harrogate) said he unfortunately lived in a place where, for the last twenty years, hardly a year passed without his seeing one or two cases of hysteria. In his experience, one of the most essential points of treatment was to remove the patient from her usual surroundings; the next was to obtain her confidence. One thing that ought to be considered was the want of power of co-operation possessed by the patient. Too much must not be attempted, but strong measures must be brought down to the weakness of the power of co-operation in the patients. A further plan was to encourage them in well-doing, as the recovery of many patients was retarded as much by the cold-heartedness of their friends as by the injudicious sympathy of some of them. He was perfectly well aware of the difficulties of dealing with these cases, but he was pleased to hear this paper, because he was perfectly satisfied that these cases were very much misunderstood both by the patients' friends and the medical attendants.

Dr. Drummond (Newcastle-on-Tyne) said he was exceedingly pleased to have had the opportunity of listening to the able exposition of Dr. Weir Mitchell's plan of treatment of aggravated hysteria by Dr. Playfair. He must confess that in a very great measure his cases of aggravated hysteria were amongst hospital patients, and he must add that he had not succeeded as well as he could have wished in his attempt to treat them by that method; the fact being that the nurses are capable of being appealed to by the patient. In his opinion, there were, generally speaking, three gross forms of hysteria—(1) that entirely independent of the will; (2) that under the control of the will; and (3) the more or less malingering form. Dr. Drummond gave instances in illustration of his views.

Dr. Ransome (Manchester) remarked that, in several cases of hysteria associated with incipient phthisis, Dr. Weir Mitchell's plan of treatment had not only cured the hysteria, but had also been of great service in improving the condition of the lungs.

Dr. Henry Bennet (Weybridge) remarked that the interest connected with Dr. Playfair's paper had attracted many members from the adjoining section, the Obstetrical. In the absence of any other volunteer, he felt called upon to break a lancet in favor of the old Hippocratic doctrine, which referred hysteria in many cases, not in all, to the uterine organs, especially in young females. He prided himself in having been the first to introduce in the profession, many years ago, a fact now generally acknowledged—viz., that uterine disease, inflammatory as well as others, was not unfrequently found in virgins, young or otherwise, and was often the real cause of the worst forms of hysteria. Owing to his having brought these facts before the profession when he was in full practice, he had seen very many cases of this kind, in consultation or otherwise. He had usually cured them merely by getting at the disease and removing it, without any special treatment of any other kind. He fully admitted that aggravated hysteria existed without uterine disease, or might continue to exist even when the originating uterine disease had been cured, and that it might require other than surgical treatment. Dr. Mitchell had cured one of his own cases, that of a young American lady, who remained all but bedridden after the removal of uterine disease. This fact, however, is not a reason for ignoring the practical facts to which he alluded, which the experience of a long clinical career had proved to be true. He constantly read in the writings of pure physicians (not gynæcologists), treating of aggravated hysteria, cases which to him were, most undeniably, forms of uterine disease, although the writers did not recognize the fact, for want of gynæcological knowledge.

Mr. Ross Jordan (Birmingham) said he thought very highly of the views so ably and forcibly expressed by Dr. Playfair. From the experience of one or two cases, imperfectly carried out, he thought the plan of treatment of the greatest advantage. He wished more particularly to say a word or two on some of the opinions expressed by one of the speakers (Mr. De Berdt Hovell), as to hysteria not being the result of uterine diseases. He thought many of the cases had such origin; and that physicians, more particularly those who professed a special knowledge of the nervous system, took a heavy responsibility on themselves, when they systematically ignored the existence of uterine and ovarian mischief in its earlier stages. No doubt, many cases of aggravated hysterics may be found without a trace of uterine disease, simply because the rest of chronic invalidism has allowed such disease to get well. He had found hysteria much more common in slight than in severe uterine or ovarian disease. He wished to say that, if such cases were properly treated, in their earlier stages, there would not be so many chronic invalids, nor so much profound hysteria.

Dr. Leech (Manchester) called attention to two cases of neurasthenia in men, which had recently come under his notice. He noted that, in both, relapses had occurred after apparent recovery; and he asked whether Dr. Playfair had noticed relapse in the cases which had been under his care.

Dr. Mahomed (London) remarked on frequency of relapse in all cases of hysteria; and asked whether Dr. Playfair had seen relapses in his own cases, or knew of them in those of Dr. Weir Mitchell. He wanted to know what had been the experience of others in the history of these cases, and their final termination, before the introduction of this treatment. He believed that the secret of the whole matter was the thoroughness of the treatment, and the complete confidence in its success. He believed that we much needed the same thoroughness in the treatment of other cases; and this could only be obtained by recognizing the truth of the plan of the treatment which it was proposed to employ.

Dr. Playfair said, in answer to the President (Dr. Clifford Allbutt), that he had not sufficient experience of the effect of the treatment in men, although doubtless in suitable cases it might answer well. In other diseases it certainly did good—as in chorea. He had himself recently cured a most intense case of chorea of nine years' duration, by this means, which had previously resisted every treatment. He had little to say in answer to the other speeches, except that the explanation of the enormous quantities of food taken was, beyond question, the excessive tissue waste produced by massage. The waste required increased fuel, and in the process of assimilation the patient recovered. It was a strictly physiological process, based on improving the nutrition of the patient. He looked upon real organic disease as a positive contraindication. As to the question of relapse, all he could say was that hitherto none of his cases had relapsed; although, as a matter of common sense, every now and again these interesting neurotic women must be expected to go wrong again.—*Brit. Med. Jour.*

New Facts in Regard to Tobacco.—Several years ago Dr. Decaisne, of the notabilities of the Société d'Hygiene, startled the smokers of Paris by drawing attention to the fact that the use of tobacco had a peculiar effect on the pulse, which he styled intermittency, and by tracing the phenomenon, then for the first time accurately described, to a rhythmically intermittent action of the heart, without organic disease, and due especially to the narcotic action of the nicotine and other potent alkaloids present in the tobacco leaf. He had at that time carefully studied the cases of eighty-one inveterate smokers, in twenty-three of whom the intermittent pulse was a confirmed trouble, not associated with any real heart disease. The intermittence vanished when the habit was abandoned even for a few weeks, and reappeared as soon as the use of the poison was resumed. In conjunction with this series of studies on adults he investigated the influence of tobacco on the circulation of boys from 9 to 15 years of age, and discovered that not only did it produce palpitation of the heart and intermittency of pulse, but also a peculiar condition of the blood itself allied to anæmia. Laziness, stupidity, and indisposition to apply the mind to study were traced, with probable accuracy to the habit of smoking in many of these lads, and, when formed early, he found that smoking gradually brought a predisposition to alcoholic stimulants, and that, in some instances, the starting point of a criminal career dated from the first secret indulgence of the vice—producing by slow degrees, when acting upon a constitution still extremely flexible, a complete moral and intellectual transformation as well as physical degeneracy. M. Decaisne, according to a Paris medical journal, has just contributed to the annals of the same society a valuable appendix to his former paper, in which he takes up the effect of smoking upon women, forty-three cases of which have come under his observation since 1865, when he commenced this special series of studies. Besides disturbance of the digestive function which was common to them all, eight presented a marked intermittency of the pulse without organic disease of the heart. No medical treatment proved of the least avail to correct the distempered function, tonics and sedatives being equally powerless. At length he was compelled to insist on his patients discontinuing the use of tobacco, and in each case where smoking was actually given up—the cautious writer says actually because he found women more inclined to deceive than men in this regard—the trouble was immediately relieved and ameliorated; and when the suppression of the habit was persevered in for a few weeks with steady purpose, the alarming symptoms disappeared altogether. M. Decaisne offers no rationale of the action of the narcotic, and enters into no analysis of the disease now familiar to popular parlance as smoker's heart; but here his observations are supplemented by those of a careful microscopic observer, who has discovered that all narcotics—opium and its preparations, hashisch, etc. as well as tobacco—act in a peculiar manner upon the colored corpuscles of the blood, producing the phenomenon styled crenation; that is, the margin of the corpuscle, instead of possessing the absolute regularity of margin noticed in the condition of health, presents a series of scallops somewhat irregular in their distribution. When viewed by oblique light under the microscope, this appearance is found to be due to the conversion of the corpuscle into a minute sac, apparently containing some hundreds of spherical bodies about one four-thousandth of a millimetre in diameter. In a few hours the sac ruptures and the imprisoned germs or organisms escape into the surrounding plasma to form bacteria when the conditions are favorable. A few such crenated corpuscles, in the proportion of one to three hundred and fifty, occur in the circulation of persons in normal health, not addicted to narcotics; but in the opium and tobacco habits, when of long standing, the ratio is sometimes as high as one degenerated corpuscle to ten healthy ones, and often attains the figure of one to twenty-five or thirty. In such cases the countenance is pale and almost cyanotic; dark circles appear beneath the eyes, which lack lustre and are deeply sunken, and the respiration is weak and easily disturbed; while the heart palpitates violently upon very slight muscular exertion. An incident illustrating the sequel of this appearance of the blood occurred a few months ago in the office of a manufacturing optician in this city. As the Professor of microscopy in one of our medical colleges dropped in, a gentleman of evidently large wealth and finished intellectual culture was just leaving the office with a cigar between his lips. He was a wealthy amateur, and had selected a valuable microscope, using a drop of blood from his own finger as a test object. The instrument was still adjusted, and the slide still beneath the lens. The Professor glanced at it; then moved the slide to and fro, so as to study one field after the other; then counted a few fields, and made a rapid computation. The optician looked on in astonishment. "That gentleman is one of our best customers," he said; "buys more heavily than a half dozen Professors." "And this is a drop of his blood?" inquired the man of science, musingly. The purveyor of lenses assented. "Very well," replied the Professor, "tell your best customer, if you can without impertinence, that unless he stops smoking at once, he has not many months to live." But he did not stop. A few weeks later he went to Europe, thinking a sea voyage might recruit his wasted energies. In a few weeks more his death was announced by telegraph from Paris, where the doctors styled his disease a general breaking up.

The Report of the Select Committee of the House of Commons upon the Administration, Operation, and Effect of the Contagious Disease Acts of 1866 and 1869 has just been published. The Committee was first appointed in June, 1879, and was continued by four subsequent reappointments, so that the inquiry has extended over a period of upwards of three years. The subject was divided by the Committee into two branches: first, the hygienic effects of the Acts; and secondly, the constitutional, moral, and social aspects of their principles and administration. And this division has been followed in the Report, preferred by a summary of the provisions of the Contagious Diseases Acts, and a statement of the recommendations of the Royal Commission of 1871.

Under the first head—the hygienic effects of the Acts—a very careful analysis is given of the statistics obtained from the Army returns, a comparison of the results as to disease at the military stations subjected to the Acts and those unsubjected to them and an investigation into the extent of the fluctuations in the proportion of cases occurring in the two groups respectively during periods prior and subsequent to the introduction of the Acts. The Committee also had under consideration an objection which has been often raised to the Army statistics, that under the head of "primary venereal sores" are included two different forms of the disease—the hard, or, as it is termed by some, the "infecting" sore, and the soft or "pseudo-syphilitic." They came to the conclusion that this was unavoidable and did not appear "to interfere with the value of the departmental statistics of the disease." It would be impossible, in the space at our disposal, to enter upon the details of this portion of the Report, but we recommend the study of them to all who take an interest in the question. The conclusion at which the Committee arrived as regards the effects of the Acts on the efficiency of the Army is, that "out of 16.69 per 1000 who would probably have been withdrawn from the efficient strength of the Army in the subjected districts, if they had not been under the Acts, 5.38 per 1000 have been daily saved to the efficient strength of the army by the operation of the Acts. To this saving ought to be added the gain to the service derived from the increased immunity of the men from the various, debilitating and incapacitating disorders which, though not classed as venereal diseases, not unfrequently result therefrom." The Committee also report as their opinion that the Acts have had a beneficial effect in reducing the amount of venereal disease among the civil population, and in diminishing the virulence of the disease among the prostitutes in the subjected districts. They conclude by saying that the "extent to which the acts have diminished primary and constitutional syphilis in the subjected districts appears of itself to your Committee to establish the hygienic utility of the Acts. The diminution of gonorrhœa in the subjected districts, attributable to the Acts, in the same period is less considerable but substantial."

Under the second head of the inquiry—the constitutional, moral, and social aspects of the principles and administration of the Acts—the Committee carefully considered the objections raised against them by the opponents, and the advantages (other than hygienic) claimed for them by the advocates, of the Acts. The conclusion at which they arrived was that the objections were not sustained by the evidence adduced in support of them. One of these appeared to the Committee so serious, that if it could be proved, it would be fatal to the maintenance of the Acts: "that virtuous women may be, and are, brought under their operation." They therefore spared no labor in probing it to the utmost, with the result that "the charges of misconduct brought against the police have broken down, and they desire to record their concurrence in the opinion expressed by the Royal Commission, 'that the police are not chargeable with any abuse of their authority, and that they have hitherto discharged a novel and difficult duty with moderation and caution.'" The Committee consider that the Acts are shown to have been beneficial by the diminution of prostitution in the subjected districts, and especially the diminution of juvenile prostitution, by the improvement of the physical condition of the women, and by the promotion of public order and decency in the subjected districts.

After this protracted, careful, and patient inquiry, the Committee came to the conclusion that they could not recommend the repeal of the Acts. They state very forcibly that the repeal in districts where they have been in operation for thirteen years and more would mean: "*a.* Full licence for venereal disease of all kinds to disseminate itself unchecked either by police or by hospital treatment. *b.* A serious diminution in the effective strength of our army and navy, which would be especially felt in the event of their services being suddenly called into requisition. *c.* The relegation of numbers of these unhappy women to the state of hopeless misery, squalor, and disease in which they lived before the system was introduced. *d.* The letting loose of increased crowds of abandoned women and girls of all ages upon streets and thoroughfares swarming with soldiers and sailors, with little or no practical check or control over their behavior. It is scarcely surprising that such a prospect should excite feelings of dismay in the minds of the more intelligent and thoughtful inhabitants of subjected districts."

The Committee do not recommend the extension of the Acts to the United Kingdom generally, apparently from a feeling of deference to the opinions of a considerable minority opposed to it; in other words, because public opinion is not yet ripe for such an extension. But they are decidedly of opinion that "it would be unfair to soldiers and sailors, and unwise from the point of view of the efficiency of the service, to abolish a system which, in localities favorable to its maintenance, has been found effective for rescuing men of both services from diseases to which they are especially exposed."

They do not recommend any alteration in the registration and police supervision, the periodical examination of the prostitutes, or the detention in hospital of those who are diseased. They recommend that in some of the unsubjected districts female lock hospitals should be established; additional powers be given to the police to enter houses of ill-fame for the purpose of taking steps to diminish prostitution; and also powers to institute proceedings for the prosecution of brothel-keepers ; that it should be a misdemeanor for any person to receive into a house any girl under sixteen years of age for an immoral purpose; and and that police magistrates should have power to grant a search warrant in cases where there is good reason to believe this has has been done, and to commit for trial any person committing such an offence.

The evidence taken before the Committee, and on which the Report is founded, will be published in due course, and will no doubt bear out their recommendations. In the meantime we can only say that the Report itself affords sufficient proof of the care with which the inquiry has been conducted, and the impartial consideration which has been given to the various important points involved in the question under investigation. The conclusion at which the Committee have arrived, in favor of the maintenance of the Contagious Diseases Acts, must commend itself to every one who has any knowledge of the widespread prevalence of venereal diseases in our garrison towns and sea-ports, and of its injurious effect upon the health of the population.—*Lancet.*

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ABSTRACTS.

Qui e nuce nucleum esse vult, frangit nucem."

R. Haidlen (Stuttgart): On Extirpation of the Entire Womb (*Arch. f. Gynak.*, XIX., 1, 1882).

Extirpation of the uterus by laparotomy (Freund) has of late been superseded by that from the vagina. H. reports seven new cases of vaginal extirpation—four recovered, three died. The operation was done five times for cancer (three deaths, two recoveries), one for procidentia, once for retroversion, etc. Follows the history of this remarkable case: Nullipara, æt. 47. Twenty-one months previously a pediculated fibroid, as large as a middle-sized apple, had been successfully removed from the anterior lip. Uterus badly retroflected and firmly attached in Douglas' pouch. In order to better expose the field of operation and make room for the downward traction the cervix, the perineal body was slit three centimetres deep backward. In separating the uterus from the rectum, the latter was accidentally opened. However, the patient did well; the recto-vaginal fistula closing of itself. Most of the symptoms incident to the flexion of the womb had disappeared.

He gives a synopsis of fifty-two cases of extirpation of the uterus through the vagina. Of these, eighteen (equals thirty-four per cent.) died of causes incident to the operation (mostly septicæmia, once hæmorrhage). The bladder was opened twice, the carcinoma having invaded its walls. The ureters were never injured.

H. is not very sanguine as to the final results of the radical operation in case of cancer. Indeed, in most of the "cured" cases, the recurrence of the morbid growth manifested itself in from six to twelve weeks. One case only which H. relates continues to do well eighteen months after operation. The surgeon should desist from total extirpation if, in case of cancer, the womb is more or less immovable, on account of attachment to its surroundings. In case of procidentia, adherent flexion, hyperplastic inflammation, hæmorrhage, etc., the operation may be resorted to after all legitimate means have been faithfully tried in vain.

As regards the mode of operating, H. speaks strongly in favor of sewing up the the wound of the peritoneum instead of using a drainage tube, in order to protect as soon and as completely as possible the peritoneal cavity against infection from the vaginal wound.

G. LEOPOLD (Leipzig): HÆMATOMA OF THE LEFT KIDNEY; NEPHRECTOMY; RECOVERY (*Arch. f. Gynak.*. XIX., 1, 1882).

Primipara, æt. 33. Six years ago she first noticed a swelling in the left hypogastric region. During the last two years, the tumor had rapidly become larger, but caused no other trouble than such as depended on its size. Circumference of the abdomen: at the umbilicus, ninty centimetres; five centimetres below ninety-seven centimetres; distance from ensiform process to umbilicus, twenty-one centimetres; thence to the symphysis twenty-three centimetres. The tumor kept a central position, and, upon close examination, was pronounced an ovarian tumor.

Operation.—The omentum having been separated from the tumor, to which, at several places, it was firmly attached, it was found that the peritoneum covered the tumor; *i. e.*, that the tumor was located behind the peritoneal sac. In the absence of any considerable attachments, the tumo, was easily brought outside of the wound, and emptied with a trocar, when it was found that the cyst was firmly attached to the lower end of the left kidney. The later offering no obstacles to being drawn up into the wound, it was an easy matter to carry three separate ligatures around the ureter and the renal blood-vessels. Finally, the kidney was cut off in such a manner as to leave at the stump a piece of kidneyt parenchyma, two centimetres thick, in order to prevent the slipping of the ligatures.

The cyst contained blood. A common envelope covered the kidney and the tumor. The latter sprang from the lower end of the kidney, yet they were both distinctly separable. The tissue proper of the kidney showed no change whatever, especially were the blood-vessels free from disease—such, for instance, as atheroma. From a clinical standpoint, the case goes far to show how difficult it is to properly locate the origin of large abdominal tumors. The patient made a good recovery, and had no trouble with her urine.

In conclusion, L. give the following statistics of so far reported cases of nephrectomy: Seventy-six cases, of which thirty-eight were operated by laparotomy, of which twenty-two died, fifteen recovered; thirty-eight by lumbar section—thirteen deaths, twenty-four recoveries—two uncertain.

H. BANGA.

T. KRONER (Breslau): ON THE INFLUENCE OF URINARY FISTULA ON THE FUNCTION OF THE GENITAL ORGANS IN FEMALES (*Arch. f. Gynak.*, XIX., 1 1882).

Menstruation.—Disorders in menstruation occur very frequently in women affected with urinary fistula. In many cases, the menses cease altogether; while in others they return only after an interval more or less protracted after delivery, or at irregular periods, being at the same time scanty and accompanied by labor-like pains. Normal menstruation is decidedly an exception. It seems, however, that the fistula itself does not account for the derangements in menstruation, which arise from the presence in the womb, the peri- or parametrium of some pathological condition, which was caused by the same difficulty in labor, to which the fistula was due. This explanation, however, will not hold good in cases where, after operation for fistula menstruation again sets in, and even continues at regular intervals.

Conception, Pregnancy, and Parturition.—Women affected with urinary fistula do not conceive very frequently—a fact which may be explained not only by the tædium coeundi, which exists on either side, but also by the presence of some disorder in the uterus or its appendices.—*Obstet. Jour.*

ON THE NATURE, MODE OF PROPAGATION, PATHOLOGY, AND TREATMENT OF SCARLATINA.—In the *American Journal of the Medical Sciences* Dr, John A. Octerlony publishes a valuable paper on this subject, based upon the careful study of fifty-eight cases of scarlatina occurring under his own observation. Under the discussion of the nature of the disease he advocates the theory of Eklund, of Stockholm, whose observations as to the parasitic nature of the disease he says he has repeatedly confirmed.

In the urine of scarlatinous patients there is constantly present an immense number of peculiar cellular bodies which have received the name of plax scindens. They consist of sporoidal cells, flat, oval, or round, and either colorless or yellowish-white ; they have a distinct cell-wall, and a nucleus of a clear brownish color. Sometimes the nucleus contains a very minute nucleolus. As seen floating about in the fluid examined, they often exhibit rotatory or screwing or see-saw movements. It has bein further observed that these little bodies multiply first by division of the nucleolus, then the nucleus divides, lastly the cell itself undergoes division ; mycelium filaments never develop from these cells, nor do they arrange themselves in beads or in the zooglœa form. These bodies are always found in the blood of scarlatinous patients, as well as in the urine, but are not known to occur in any other disease. Hence it would appear that the infectious agent of scarlatina has been found.

The monograph considers, in addition to this point, the mode of propagation of scarlatina, its pathology, pathological anatomy, and treatment of the various forms under which the disease is met.

A Case of Lodgment of a Foreign Body in the Cavities of the Nose, Orbit, and Cranium, where it remained Five Months. Removal by Operation; Subsequent Trephining for Pus in the Brain; Death; Autopsy.—The above is the title of a remarkable case reported by Dr. Henry D. Noyes, M. D., in the *American Journal of Medical Sciences* for July, 1882.

A farmer in robust health was wounded in the face by the explosion of a gun. He was knocked senseless, and something was heard to whiz past his companion as the gun exploded. The wounded boy remained unconscious about four days. When he came under the care of Dr. Noyes, five months later, for the performance of a plastic operation, he was apparently in good health. with a deep scar extending from the middle of the fractured and depressed nose along the inner canthus of the right eye upwards and outwards to about the middle of the brow. The upper lid was closed, the palpebral fissure was below the normal level, a fistulous opening existed at the inner border of the eyebrow, the right eyeball was atrophied and immovably adherent to the tissues at the inner portion of the orbit, and from the nostrils there was an offensive discharge, which suggested the presence of carious bone. The nasal bones were badly sunken, and the tip of the nose turned up. On exploring the nasal cavity, by the aid of a mirror and gaslight, a foreign body was discovered in the middle of the right side, which clicked like iron when touched with a probe. The finger passed through the mouth into the posterior nares, came in contact with this body, and the patient submitted to a pretty vigorous attempt at its extraction, when it was seized in front by a pair of strong polypus forceps, and pressed upon from behind with the forefinger of the other hand carried up behind the soft palate. The mass could not be stirred, and he was soon convinced that it extended into the orbital cavity.

A week later it was removed by an extensive operation. The patient did fairly well after the operation, but soon began to show symptoms of suppurative inflammation in the brain ; the skull was therefore trephined, and a brain abscess opened. The patient died thirty-nine days after the removal of the foreign body. The value of the paper is greatly increased by a careful and full report of the autopsy by Dr. Welch.

A Clinical Study of the Disease and Curability of Inebriety.—Dr. T. D. Crothers, in the *American Journal of the Medical Sciences* for July, 1882, publishes an analysis of thirty-five cases of inebriety, directing especial attention to the heredity of the inebriate diathesis, the general exciting or predisposing causes, the existence of regularity in the attacks, the nature and character of the treatment with the comparative results under different methods.

INDUCED SEPTICÆMIA IN THE RABBIT.—The object of the paper on this subject, by GEORGE M. STERNBERG, M. D., Surgeon U. S. A., published in the *American Journal of the Medical Sciences* for July, 1882, is to compare the results obtained in some recently reported experiments upon rabbits, with the writer's experiments made last year under the auspices of the National Board of Health.

These two series of experiments considered together give confirmation to the view, already entertained by high authorities upon clinical and experiment evidence, that there are two forms of septicæmia; the one a septic toxæmia due to the effects of a chemical poison or poisons evolved during the putrefactive decomposition of certain organic substances—especially of nitrogenous animal products—the other an infectious disease produced by the rapid multiplication in the body of the infected anima of a parasitic organism.

On contrasting, however, the results obtained by Dr. Braidwood and Mr. Vacher, the experimenters alluded to, with those obtained by Dr. Sternberg, from the subcutaneous injection, in the rabbit, of human saliva, we find very striking differences, which may be summarized as follows: (1) greater mortality; (2) lethal dose much smaller; (3) date of death and pathological appearances quite uniform; (4) putrefaction of saliva destroys its virulence; (5) virulence is connected with the presence of micrococci; (6) serum from subcutaneous connective tissue and blood from an animal recently dead swarms with micrococci, and is virulent in the smallest quantities; (7) antiseptics promptly destroy virulence of saliva and of fluids from the body of infected animals.

RUPTURE OF THE LEFT FALLOPIAN TUBE AND COPIOUS HÆMORRHAGE INTO THE PERITONEAL CAVITY.—Dr. J. F. HARTIGAN reports, in the *American Journal of the Medical Sciences* for July, 1882, a case of this character occurring in his own practice, with the *résumé* of the reports of eighteen others. His case was a colored woman, æt. 33, mother of five children, who, after complaining of abdominal pain for several weeks, became suddenly worse and died. At the *autopsy* the next day the quantity of blood in the abdominal cavity was amazing; a rupture of the left Fallopian tube was found on its superior aspect, irregular in shape, one-fourth inch long, and an inch from the uterus; there was partial dilatation and attenuation of the walls of the tube in its middle; the finest probe would not penetrate the ostium internum; the ostium abdominale was open. The uterus was enlarged, five inches long, and empty, its rugæ, however, and lower garments of the woman, were found slightly tinged with the menstrual flow. There was also a true corpus luteum, of a dusky hue, included, perhaps, in one-sixth of the left ovary. Other organs normal.

THE GEOGRAPHICAL AND CLIMATIC RELATIONS OF PNEUMONIA.—From a valuable paper on this subject, by Dr. E. SANDERS, published in *The American Journal of the Medical Sciences* for July, 1882, we extract the following conclusion: 1st. The relations of pneumonia to altitude are definite and marked; with increase in elevation above the level of the sea, there is a steady diminution in the death-rate of pneumonia. 2d. The mean annual rain-fall of a place bears no positive relation to pneumonia. 3d. The higher the death-rate of a place from all causes, the greater the mortality from pneumonia. 4th. The larger the actual population of a locality, the greater its relative death-rate from pneumonia. 5th. There is a direct, positive, and unequivocal relation between the mean annual temperature of a place and its death-rate from pneumonia; the rule being that a high mortality from the disease coincides with a high mean annual temperature. 6th. Proximity to large bodies of water, such as lakes, inland seas, or the ocean, exerts no appreciable influence on the pneumonia-rate. 7th. For North America, pneumonia increases in frequency as we pass from east to west; for Europe as we advance from west to east, the rate of increase being very nearly twice as great in the case of the latter as in that of the former. 8th. Pneumonia, all other things being equal, increases in frequency the further we advance from the polar regions towards the tropics; this, however, only up to a certain parallel, beyond which it seems to become less and less commonly met with, until at or near the equator, where it apparently disappears.

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MEDICAL SOCIETIES.

"Vitæ Post Scenia Dicunt."—Lucretius.

Metropolitan Counties Branch: East London and South Essex District, Herbert Davies, M. D., in the Chair.

SOME OF THE NEWER OPERATIVE PROCEDURES IN ABDOMINAL SURGERY.

Sir William Mac Cormac read a paper on this subject. He first alluded to the antiseptic treatment of wounds, and to the protection which that method afforded to operations involving the opening and exposure of the abdominal cavity. A woman, aged 68, was under his care with an immense ovarian cyst. He attempted to remove the tumor in the ordinary way; but, in consequence of its being intimately adherent everywhere, was compelled to desist; and, during an attempt to separate the connections of the tumor, he found that he had caused a rent in the bladder four inches in length, out of which a considerable quantity of urine escaped. The wound in the bladder was sutured, the abdominal cavity carefully cleansed, the edges of the cyst attached to the external wound, and two large drainage-tubes inserted. An aseptic condition was maintained throughout. Notwithstanding her advanced age and the extent of the injury, the patient made an uninterrupted and complete recovery. Sir William expressed his belief that, with due precautions, the abdominal cavity might be laid open, and closed again, without causing any appreciable risk to the life of the patient. He referred also to the performance of many operations involving the hollow viscera, or the mode of evacuation of abscesses or hydatid cysts, in two stages so that the second, more important and dangerous, part of the operation became extraperitoneal; as in cases of abscess or hydatid cyst in the liver. After mentioning the necessity for efficient drainage after many operations involving the abdominal cavity, Sir William Mac Cormac spoke of excision of the intestine. The excision of a diseased portion of cancerous gut he considered a great advance in adbominal surgery, as it substituted an attempt to procure a radical cure for a mere palliative procedure. This operation was first successfully performed by Martini of Hamburg, and similar operations had recently been performed in this country by Mr. Marshall and Mr. Bryant. In cases of intussusception and of hernia with gangrene of the gut, the necrosed portion of the intestine had been removed, and the two divided ends sutured together, with success in several instances. Sir William next spoke of nephrotomy and nephrectomy. The morbid conditions for which the latter operation had been undertaken up to the present time included fistula of the ureter, calculous pyelitis, pyonephrosis, new growths, malignant disease, floating kidney and injuries of the organ. He narrated a case of removal of the entire uterus by abdominal section, for cancer of the cervix, and presented the patient herself in a condition of perfectly restored health. He also showed the parts removed at the operation. The woman, thirty-three years of age, married, but without children, had previously enjoyed good health. The catamenia were regular, but sometimes painful. She was a flower-seller, much exposed to the weather, and not absolutely abstemious. She began to feel ill last July; but, until the middle of September, no very definite symptoms declared themselves. Then she had pain in the lower belly, with vomiting and headache, and she occasionally had pain when the bowels acted. At the end of September, she had an attack of constipation, also a rigor; and the pain became so severe as to confine her to bed. On admission to hospital, under the care of Dr. Ord, the patient was found to be suffering much pain, chiefly in the left iliac region, where a distinct fulness could be felt. A bimanual examination disclosed an intimate connection between this and the body of the uterus, which moved with it. Great difficulty was experienced in emptying the bowel. A daily purgative of castor-oil had to be administered, and complete obstruction threatened from time to time. On November 29th, Sir William examined the patient. A large cauliflower growth protruded from the os. The growth was hard, and secreting a large quantity of sanious discharge. It presented the features of epithelial carcinoma. It involved the whole of the os, but did not encroach on the vagina. The fulness in the left iliac region suggested secondary deposits or involvement of the lymphatic glands. Dr. Gervis and Dr. Cory also examined the case, and were of opinion that there was carcinoma of the cervix and os uteri. The tumor in the pelvis now caused great difficulty in the evacuation of the bowels, and produced several attacks of more or less complete obstruction. Sir William determined to interfere, and the first step he took was to remove the growth and the os with the actual cautery, both for purposes of diagnosis, and to render the subsequent removal of the uterus less likely to be attended with septic contamination. The patient was thus relieved of the horribly fœtid discharge from the vagina; but the symptoms of obstruction continued, and it was determined, without further delay, to open the abdominal cavity, and remove the presumably diseased uterus with its appendages. On January 2nd, 1882, an incision was made, commencing two inches below the umbilicus, and reaching to the symphysis pubis. The pelvis was found to be blocked by an elastic tumor, which completely concealed the uterus. It was the pressure of this tumor against the rectum which had caused the intestinal obstruction. It was semi-elastic or fluctuating, and adherent everywhere. It was punctured with a trocar, and a quantity of fœtid pus escaped. The greatest difficulty was experienced in preventing some of this from entering the peritoneal cavity. With some difficulty the tumor, which was apparently contained in the right broad ligament, was detached from its adhesions and removed, together with the right ovary and the uterus. The left ovary was not interfered with. It seemed healthy; the patient was somewhat collapsed, and it was necessary to conclude the operation, which had lasted upwards of an hour. The pelvic cavity was cleansed thoroughly, and a large T shaped, double-barrelled drainage-tube introduced into it through the vagina. The lower pelvic outlet was not sutured or closed in any way. The external abdominal wound was closed as after ovariotomy; an elastic rubber catheter was introduced into the bladder, and the perinæum enclosed in an antiseptic dressing continuous with the two abdominal dressings. The patient subsequently suffered severely from acute bronchitis, probably due to the prolonged exposure, but otherwise no symptoms of importance occurred during the after-treatment. In order to keep the wound pure, the pelvic cavity was daily washed out three or four times with eucalyptol lotion, of the temperature of the body. It was found that the rubber drainage-tubes, from the heat and pressure, easily collapsed in the vagina, and that efficient drainage could only be maintained by keeping them open by means of glass tubes. A month after the operation, the abdominal wound was firmly closed, and the fundus of the vagina had almost healed. There was not the slightest tendency to prolapse of the abdominal contents at any time. The patient had since returned to work, and enjoyed apparently complete health. On being recently examined, there was not the slightest appearance of any tendency to recurrence, nor any prolapse of the vaginal roof. How long the patient might remain free from relapse, was a question which could only be decided by future observation. Sir William also passed in review the history of the operation of excision of the pylorus. The first successful operation of this kind was performed by Professor Billroth, of Vienna, who was followed by Rydygier and Wolfler, although Péan was the first to execute the operation. It was performed for the first time in this country by Mr. Southam, of Manchester, but not successfully. Altogether, up to the present date, the operation had been performed sixteen times, fifteen of the cases being for cancer. Eleven terminated fatally; five recovered, and lived for various periods. Cancerous obstruction of the pylorus would prove the most frequent indication for operative interference. As the difficulty of passage of food from the stomach increased, the organ dilated, sometimes enormously; there was constant vomiting after food; great emaciation occurred, and the patient became more and more exhausted, until death closed the scene. As soon as a diagnosis could be made, the operation should be undertaken in cases otherwise suitable. When the tumor was freely movable, and other circumstances were favorable, the operation might be performed. In old, anæmic, or much debilitated subjects, operation was quite contraindicated. When the tumor was fixed by adhesions to adjacent parts, more especially to the colon and head of the pancreas, its removal, were it attempted, would be impracticable. If during the operation it were found that the pancreas was involved in the growth, or the colon adherent, it was best to close the abdomen, as the safe removal of the growth was impossible. In doubtful cases, an exploratory operation was justifiable; and Konig had done so in six instances in which he afterwards closed the wound, and no ill consequences followed. An examination of the amount of mobility of the tumor should always be made beforehand, and, if necessary, under chloroform. Sir William, having described the means by which a correct estimate of the character and relations of the tumor might be made, minutely described the mode of operation in these cases, which he illustrated by wood-cuts. He concluded by quoting a remark from an address on Antiseptic Surgery, delivered in 1879, viz., that as "about one-half the cases of cancer of the stomach affect the pyloric end, and a third of these reach the *post mortem* table before the disease has contracted adhesions to surrounding parts, it would seem that where an exact diagnosis is possible, our surgical resources may extend to the excision of a cancerous pylorus." A hearty vote of thauks was accorded to Sir William Mac Cormac for his very interesting and instructive address. —*Brit. Med. Jrn.*

CORRESPONDENCE.

London, August 12, 1882.

LETTER FROM LONDON. THE JUBILEE MEETING OE THE BRITISH MEDICAL ASSOCIATION AT WORCESTER.—The Jubilee Meeting of the British Medical Association terminated yesterday, after enjoying unsurpassably fine weather for its reunion in the city of its birth, Worcester.

To-day a very large majority of the seven hundred and fifty members who visited Worcester are remaining to enjoy excursions and hospitalities which have been liberally provided in the picturesque neighborhood. An excursion to Stratford-on-Avon appears the most popular.

The sectional work of this year's meeting has been conducted under the following eight heads: Medicine, surgery, obstetric medicine, public medicine, anatomy and physiology, pathology, ophthalmology, otology. Though the meeting began on

Tuesday the arrangements were made so that but eight hours were allotted to sectional work, none of this taking place before Wednesday. Certain of the sections, indeed, did not meet at all for the two hours allowed them on Friday morning. It has resulted, therefore, that this Worcester meeting has witnessed certainly less work and probably, too, more play than characterized the gathering at Cambridge in 1880. Next year will find the Association gathered at Liverpool, when its members may be expected to have recovered from the demoralizing effects of the picnic trip in which they indulged in the Isle of Wight after the labors of last year's International Medical Congress. From the custom of the various sections meeting simultaneously, it is impossible for members to avail themselves as fully as they might desire of the opportunities offered in different sections, and it seems that it would be more profitable if, in future years, the time for sectional work were more extended, not by giving more time to particular sections, but by arranging for only one half of the sections to be simultaneously in session.

The attendance in the various sections has been fairly good this year, though my suggested arrangement would afford an opportunity for doubling such attendance. It must be obvious to every attentive observer of these annual gatherings that only a portion of the members attend with any intention of participating in the sectional meetings, while the aspirations of those who do so are greatly thwarted, and the general quality of the sectional work is seriously impaired by man's inability to be in two places at once. This has been strikingly exemplified in the recent work of the pathological, ophthalmological, and otological sections.

I hear that the discussion on the morbid anatomy and pathology of diabetes was particularly able, the elaborate and original contributions of Hughlings Jackson and Pavy deservedly attracting much talent to this section, with the result of depriving the ophthalmological section of many of those physicians who were expected to have enriched the discussion, opened by Mr. Nettleship, on the following subject: To what Extent do the Signs derived from the Examination of the eye and its Appendages contribute to the localization of Central Nervous Diseases?

There was an unmixed expression of admiration and delight at the address on surgery, in the delivery of which Professor Stokes proved a medical orator, scarcely, if at all, second to Sir James Paget.

Necessarily much of the public speaking at this Jubilee Meeting had to do with the founder of the Association, Sir Charles Hastings. To the citizens of Worcester Sir Charles Hastings was more than a successful physician and a leader among his co-practitioners. To them he was the embodiment of the intellectual life of the city. To his energy and advice they owe the museum which now bears his name. The members of the local branch of the Association gave a luncheon to upwards of five hundred of their brethren visiting Worcester, and the occasion was utilized for the presentation to the corporation of a bust of the late Sir Charles Hastings.

The chairman said that the object of the meeting was twofold. The chief object was to do honor to the memory to the founder of the Association, Sir Charles Hastings. (Applause.) The second object was that the Worcestershire and Herefordshire Branch should have the pleasure of meeting as many friends as could possibly assemble in that large building. (Applause.) That being probably the largest assembly which would take place, he begged to wish them a hearty welcome to Worcestershire. (Applause.) He hoped they would drink with all their hearts, although in silence, to the memory of the most worthy founder of that large Association, Sir Charles Hastings. He would call upon Mr. George Hastings, son of the late Sir Charles Hastings, to give some memorial of his life. The son stated that Charles Hastings was a boy of great energy, a characteristic which he maintained through life. Like most boys of energy he was much more fond of outdoor sports, such as hunting and shooting, than he was of his books; but from the earliest period of his life he manifested a leaning towards the pursuit of that profession which he afterwards adopted. There was nothing around him to lead him towards it. He was born and bred in a country rectory with the usual surroundings, having no single relative, and perhaps no intimate friend, who was a member of the medical profession; but even as a child, and still more as a boy, his great love was to nurse any one or anything that was sick and ill. It had been said by members of his family, and by one who was now living at the age of one hundred years in full possession of her faculties,—(applause),—that she would seldom find him without a sick chicken or some other creature that needed care. When he was a boy, at an age when most boys were still at school, he expressed a desire to begin to learn medicine; and he was allowed to place himself under the care of two medical practitioners living not far from his home. He showed such remarkable aptitude that in a few months they advised that he should be sento London, to have the advantage of seeing the hospitals and hearing public lectures. When he was only just turned eighteen years of age and was possessed of no medical titles of any kind, he was elected, by the majority of a single vote, to be house-surgeon of the county infirmary at Worcester. While there he commenced those experimental researches which laid the foundation of his fame. There was practicing at that time in Worcester a physician, who afterwards removed to London, Dr. Wilson Phillip, who was engaged in researches on the nature of circulation and the action of blood-vessels. Charles Hastings voluntarily undertook to assist Dr. Phillip in those researches. He then left for the University of Edinburgh. It was recorded of him that he was the first student of that great University, and probably the first student in the kindom, who used the microscope for the purpose of physiological research. (Applause.) He was ridiculed for its use, but Charles Hastings was a man impregnable against ridicule, because he knew he was seeking the truth, and confident he was seeking it in the right way by experiment. Immediately after taking his degree of Doctor of Medicine he was offered by the Senate of the University the Professorship of Physiology. From his earliest years he was a naturalist, a man of science. He was probably the first to write upon the geology of Worcestershire. He was the early expounder of the remarkable geological features on the flanks of the Malvern Hills, the friend of Murchison and Sedgwick.

In the president's address the following allusion were made to the origin and origitor of the British Medical Association: In July 1832, the foundation-stone of their own Society was laid in the city of Worcester by its distinguished and ever-to-be respected founder Charles Hastings, and his small, but devoted band of coadjutors.

No wonder, that to a mind like that of Hastings, fresh from the warm atmosphere of the Medical Society of Edinburgh, the cold stagnation of a provincial city was unbearable. He read papers, started journals and societies on a small scale; but it was not till 1832 that he received sufficient encouragement to venture upon the step which he proposed should result in placing the provincial practitioner in almost as good a position as his metropolitan brother. And what was the condition of the provincial practitioner at this time? With the exception of a few local physicians of the older stamp, solemn, scholarly, and formal, and here and there an apothecary of more than ordinary acuteness of observation, there existed one dead level of mediocrity, men without the ambition to compete with their metropolitan brethren, because the means of doing so was denied them. No sparks of genius emanated from their brains, because there was no mental friction to produce them. No doubt it was the inferior education of the general practitioner, that made him literally a copier of other men's prescriptions, and the collector of current nostrums for certain symptoms. Bundles of prescriptions were handed down from one practitioner to another along with the practice. Having no other idea but that disease was an entity, he set to work to drive it out of the system by the popular means of bleeding, purging, and sweating. If this were the intellectual status of the principal practitioner half a century ago, were his morals and social status of a higher grade? The top-boots and the red coat did duty for the stethoscope and the test-tube; whilst the lancet was thrust into the arm of the too willing patient as recklessly and ruthlessly as the spur and the whip had been applied to the sides of the animal which brought doctor and patient together. These were the palmy days of the provincial physician! Many times had he been figured, as, with solemn step and well-poised cane, he descended from his lumbering post-chaise at the door of some opulent patient. The arrival of this great man in some country town was quite an event, and the signal for all the blind, and halt, and lame to turn out literally for a touch of the great man's hand! Those who could pay pulled out their guineas; those who could not, might perhaps count upon getting a glance and a word from the "Great Doctor," as he was called, as he passed through the admiring crowd to his carriage, in the court-yard of the inn. For some years, after 1832, very little progress was made by the provincial profession. One of the results of the establishment of the Association, had been that the College of Physicians, before so exclusive, threw open its doors and its honors, about 1860, to all qualified applicants, the College of Surgeons having somewhat earlier given an impetus to enlarged studies ful to him, and scientific attainments rare; whilst the desire for improvement, which might casually arise found no field for action. So he settled down into the mere by the establishment of its present fellowship examination.

The president concluded by urging the importance of strengthening the branches and of modifying the electoral system so as to infuse new blood into the senate of the Association. Great questions were coming on for solution. He trusted they might be solved in accordance with the motto of their Association laid down for all time by Charles Hastings and his associates. When that consummation should have come pass, when self-interest and self-assertion should have given place to brotherly cooperation in well doing and to Christian charity, and courteous deference to one another, then, and only then, would the British Medical Association have ful-

The annual report of the Council of the Association showed that the receipts during the past year were £16,525. The Association now numbered 9563 members. Among those who had passed away during the year were—Sir Robert Christison, who was president in 1875, and Dr. Jenks, who was president in 1851. The question of homœopathy, unfortunately mooted in the address in medicine and in surgery at the annual meeting at Ryde, had occupied much time on the part of the Committee of Council. The idea arose in many minds that the views enunciated had in some way been put forward by the Committee of Council; and it was not until the president of the Council, Dr. Bristowe, and Mr. Hutchinson, had shown that this was not so, that the feeling was allayed. A memorial was presented from one branch demanding the expulsion of a member, on the ground of his public profession of homœopathy. To this measure the Committee of Council would not accede. So far as possible they had closed the door of entrance to a professing homœopath. Against conversion to homœopathy after admission they were at present powerless, except by the expulsion of the offender; and this, under present circumstances they considered unadvisable; first, because they held that such a course would be beneath the dignity of the members of a great and avowedly liberal profession; and secondly, because it would confer an amount of notoriety which was very undesirable upon those who were expelled.

Mr. Nelson Hardy proposed the adoption of the report, with the following addition: "That it be an instruction to the Committee of Council, that the avowal of the profession of homœopathy, or any other designation implying a special mode of treatment, shall, *ipso facto*, disqualify from membership of the British Medical Association."

This proposal was the signal for an exceedingly noisy and animated discussion, which showed the small sympathy felt by the Association for real and pretended homœopaths. The proposal of Mr. Hardy was ultimately lost by an overwhelming majority who evidently thought it was wiser to treat homœopaths as beneath contempt, rather than to bolster them up with the cheap dignity of martyrdom which could be conjured out of such a resolution as was defeated.

As in previous years this annual meeting was made the occasion for various subsidiary gatherings; thus, on Thursday morning some five hundred members of the Association availed themselves of a breakfast given by Mr. Bowly, a Nestor of the total abstinence advocates here. After breakfast Dr. Alfred Carpenter, and other advocates of total abstinence from alcohol, indulged in those intemperate speeches so characteristic of these well meaning advocates of temperance, who essay to believe that the righteousness of the cause they preach is an excuse for the total disregard of facts which characterizes their arguments.

Dr. Alfred Carpenter's remarks, taken literally, would mean that the great majority of the medical profession (namely, those who are in the habit of treating disease in persons who are not total abstainers) are totally ignorant of the various phases presented, and courses run by pulmonary, cardiac, renal, and hepatic disease in persons who never take alcohol. These intemperate total abstinence people were singularly ready to misquote and misrepresent the remarks of various able speakers in the different sections, as was well exemplified by one speaker in his so-called quoations from Dr. W. S. Playfair, who, in a most able manner, opened a discussion on he systematic treatment of aggravated hysteria and allied forms of neurasthenic disease.

Some two hundred members dined together on Thursday night, and this year saw carried out on a substantial scale the resolution, passed at Cambridge, that total abstainers should pay but two-thirds of the price charged for the dinners to those who were "less advanced." The Irish Graduates' Dinner was celebrated on Wednesday night, without that uproarious joviality which rendered the same dinner notorious when held on the native land, during the Cork Meeting. This reminds me to mention that the Association will probably meet in 1884 at Belfast, where they will be able to witness the great prosperity and unsurpassed industries of a town in that distracted island, which is now being made the subject of speculative and enthusiastic legislation, while the priest-craft is uninterfered with, though so largely responsible for the misery and savagery of so many districts.

Yesterday witnessed a warm debate on the ardent question of the compulsory notification of diseases by medical men. The following motion was ultimately adopted by a large majority:

"That this meeting earnestly desires the compulsory notification of infectious diseases, but wishes to express an opinion that the compulsion to notify should be placed upon the householder, in his duty as a citizen, and not upon the doctor."

There were numerous complaints in at least one section regarding a scarcely creditable practice which could be "burked" by the adoption of a very simple rule. It would seem that some few persons are in the habit of announcing their intention to read papers (and, indeed, in some instances of supplying abstracts thereof for publication in the *Journal*) which they never furnish. Such persons appear satisfied with the cheap and dishonest publicity their name obtains by its announcement with the high sounding title of some contribution which has no other existence than in their own crafty heads. I met one busy member of the Association who assured me that on three different occasions his entire arrangements had been put out to visit distant towns where a particular paper was announced to be read by an individual on an exceedingly debatable subject. The victim of this poor artifice suggested that its repetition would be avoided if no announcement were made of papers which were not in the hands of the secretary of the section, who would be authorized to read them in the event of the author being unavoidably absent.

The lord lieutenant of the county and the Countess Beauchamp gave a garden party to the Association at Madresfield Court, Great Malvern, yesterday afternoon, so those who accepted this hospitality enjoyed some of the most picturesque scenery to be found in this garden-like island.

The Industrial Exhibition, which is now open at Worcester, the Royal Porcelain Works and many endemic industries of the neighborhood, greatly enhanced the interest of this Jubilee Meeting, which has certainly passed off most satisfactorily; and I should not have made the foregoing adverse criticisms, except in the hope that the cause for them will be removed, and that there will cease to be those obstacles which now contribute to make these annual gatherings mere pleasure trips for the many and disappointing labor for the few.—*Boston Journal.*

Office National Vaccine Establishment, No. 332 C Street, N. W.,
Washington, D. C., August 10, 1882.

Dear Doctor.—I am very sorry to inform you that an increase of duties connected with the National Vaccine Establishment, of which I am the Director, renders imperative a suspension of Walsh's Retrospect until January, 1883. I then expect to complete Vol. III, and continue the publication of the Journal.

Yours, truly.
Ralph Walsh, M. D.

Trenton, Tennessee, August. 29, 1882.

Dr. Gaillard.—In my communication on Antipyretics page 792 of August. 19, you give my address, Stanton Tennessee; it is Trenton, Tennessee.

Respectfully.
S. M. Caldwell, M.D.,

Chicago, September 10th.

Doctor:—

Chicago like many other cities is beset with politicians, for those quasi medical positions must be provided, and they are thus placed in position to dictate to medical men. As they are drawn from the lower uneducated class their course on such occasions is an apt illustration of the adage about the beggar on horse back. The Warden of the county hospital is an apt illustration of this class of individuals. Charged with appropriating cash of patients dying in the hospital his course toward the hospital staff is that of an arrogant dictator. Dissatisfaction with his procedures has at length resulted in a public meeting of the consulting board to protest against his actions. At this meeting were Drs. Fenger, Lee, Cunningham, Gunn, Parker, Isham, Graham, Hollister. The meeting was specially called by Dr. Lee to bring before the board some cases of unwarranted interference on the part of the warden with his professional duties. The first case was that of a boy named Periolat, whose leg had been amputated. The case was assigned to Dr. Lee, and he observed symptoms of tetanus. He so informed the boy's father, and explained that an emergency was likely to arise at any time which would render necessary stretching a nerve, and that if this exigency came, a delay would be probably fatal. To this the father assented. For a time the case progressed favorably. But two or three days later, early in the morning, a message was brought to the doctor that the boy had been in convulsions all night. He immediately repaired to the hospital and prepared for the operation, which, in his opinion, needed to be done quickly. Some night clerk, or watchman, or nurse informed him that he had orders to prevent the performance of the operation unless a consultation of physicians should first be held. To this the father, under instructions from the warden, also assented. Dr. Lee remonstrated, but to no avail, that delay was dangerous, and that the boy might die at any moment. Discouraged at last, he left the hospital, saying that when the consulting physicians arrived he might be sent for. Five hours later he came back to the hospital, and found that the consulting physicians had not yet arrived, and that the boy was still in convulsions. Shortly afterward they came and agreed with his advice. The operation was performed and the boy recovered, having endured seven or eight hours of agony which might have been obviated had it not been for the absurd interference.

The next case was a girl whose hip had been excised. There was an unwritten rule in the hospital that no anæsthetics should be administered in the wards, but such cases should be transferred to the operating-room. In this case, however, a simple exploration was necessary, and it was not thought safe to move the patient from the ward to the operating-room, and so the doctor administered the anæsthetic and performed the operation where she lay. For this he was called to account by the warden in an imperious manner. He related the circumstances, and was told that he would be made to obey the rules. The warden reported the case to the committee on hospitals, which passed a vote of censure upon Dr. Lee without notifying him.

The next case happened but a day or two ago. A man had a foot crushed by a train. In order to save a part of the foot the doctor came to the conclusion that it would be necessary to transplant skin from an animal, in which operation he had the patient's consent. Again the warden stepped in and told him that he had orders from the hospital committee, or the chairman of it, not to allow the operation without a consultation from other members of the staff. The operation involved no danger to the patient, but desiring to comply with the rules he called the consultation. The physicians agreed with him, and so reported to the warden, when that official informed him he might proceed after he had the consent of Chairman Mattocks. This was the last straw that broke the camel's back, and he resolved to call the present meeting. In each of these cases he had gone to Mr. Mattocks and remonstrated with him, and had invariably received the answer that if he did not like the rulings of the committee he might resign.

At the conclusion of this statement Dr. Hollister, the chairman, called for expressions of opinion as to what the board should do in the matter.

Dr. Gunn said that, while his personal relations with Warden Dixon had been pleasant, still he had been interfered with in the performance of his professional duty in an unwarranted manner on one or two occasions. The medical management of cases in the hospital, he said, should be left to the physicians, and no layman, no matter how high in official position, should presume to dictate in matters of this kind. Too much of this had been going on, and it was high time for the doctors to assert the dignity of their profession. He was in favor of having the medical board make the medical aud surgical rules of the hospital.

Dr. Isham had also observed several instances of officious interference on the part of the hospital committee with the professional operations of the physicians. The duties of the doctors and surgeons were professional, merely, and should in no wise be interfered with by county physicians.

Other members of the meeting expressed themselves in the same manner as sympathizing with Dr. Lee, and a committee consisting of Drs. Dee, Gunn, and Fenger, was appointed to draft resolutions on the subject to be submitted to the medical board at its monthly meeting. It is probable that, as in other cities, a desire to appoint medical friends of the powers that be has led to these procedures. Hospital positions here as elsewhere are much in demand; still, such interferences as those narrated, should be resented by every member of the profession. The warden and the other politicians will, however, doubtless persevere in their course, as they can get "plenty of doctors to take the place of the present medical board." G.

CHICAGO, Aug 30th, 1882.

DEAR SIR.—The medical profession in Chicago presents certain peculiarities which impresses themselves very vividly on the new comer. There is a curious mixture of progress and shall it be said conservatism. Among what may be considered evidences of progress is the wide recognition given to female members of the profession. They are met with in all medical positions, and even in the hospitals act conjointly with males. At the same time there is a great tendency to defer to what may be called medical Popes who have grown up with the city and are consequently held in great reverence. These Popes have introduced the delectable practice of reading the same medical paper three times; once before the local societies, once before the State Society, and finally before the American Medical Association. This example has been followed by many of the younger men. Some of the latter have even improved on it. They have read the same paper, say on tracheloraphy, before the three City Societies and finally published it in two Medical Journals. Some of the medical Popes are great men in the American Medical Association and are stern sticklers for the code of ethics. In their practice however, they are systematic under bidders, not hesitating to go to all parts of this very large city for a very small fee. Their reputations being great, they compel the younger practitioner to undergo very severe straits to compete with them. Occasionally they go to a patient, a prominent church member, in circumstances which should preclude all idea of charity, and refuse a fee with noble unselfishness in order to secure an advertisement. These evils are, to be sure, found in all cities, but the persons most addicted to them in Chicago are so puritanical in other respects that such practices seem to show the greatest hypocrisy. The temperance cant is very prominent here and several of the Popes have declared that the use of stimulants was not allowable, since it was better that a patient should die, then that he should live to become a drunkard. This has led all the old women of the town to contrast the practice of the young practitioner who has learned the value of alcohol in disease, with the practice of Dr. Pecksniff to the former's great disadvantage. There are however many surgeons of great originality here and physicians of ability, but there is too great a tendency shown to respect humbug, because it is old, a tendency which is inconsistent with that "push" the city is credited with. In regard to medical education, Chicago is well provided. There are four regular colleges; two homœopathic and one eclectic. Thanks, however, to the influence of the State Board of Health, all these colleges now exact a preliminary examination on the branches of a good English education. The following are the minimum requirements of the Board: 1. Credible certificate of good moral character. 2. Diploma of graduation from a good literary or scientific school, or, lacking this, a thorough examination in the branches of a good English education. In addition to the branches ordinarily taught, hygiene and jurisprudence must also be taught. The sessions must not be less than twenty weeks each, and no two sessions can be held in the same year. Allowance of absence to be made only on account of illness, and not to exceed twenty per cent. of the session. Quizzes must be held at least twice a week. The final examination must be by competent examiners, other than the college faculty. The student must present credible evidence of having studied medicine three years. These requirements go into full operation at the close of the coming session, but they have already produced their effect. The colleges of the State have all made preparations for a preliminary examination into the educational status of medical students in prose, and one Eastern college has yielded to the inevitable, and has requested the appointment of an examiner, to whom it can refer the Illinois candidates for its teachings. At the close of the present session, these requirements will be rigidly exacted from all colleges, and all who do not come up to them will have their graduates re-examined by the State Board. This examination is exceedingly rigid. The hospitals are, as elsewhere in the great cities, very well supplied with consulting physicians. These positions have, in the county hospital, been recently rearranged, so as to give all regular colleges and the homœopathists an equal recognition; the latter gentry have a department of a hospital to themselves. As already stated, there are two homœopathic colleges here. One represents the "pure," and the other the so-called liberal or "mongrel" homœopathists.

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REVIEWS.

"Judex damnatur cum nocens absolvitur."

THE CHANGE OF LIFE IN HEALTH AND DISEASE: A CLINICAL TREATISE OF THE GANGLIONIC NERVOUS SYSTEM INCIDENTAL TO WOMEN AT THE DECLINE OF LIFE. By EDWARD JOHN TILT, M. D., Past President of the Obstetrical Society of London. Fourth edition. Philadelphia: P. Blakiston, Son & Co. 1882.

This is another of the publishers' cheap reprints of an old and well known work. The reader is too familiar with the reasons against cheap reprints of foreign works, for them to be repeated here. If these European authors were paid ever so little for having cheap reprints pitted against their well issued works in the market, and so driving these to the wall, one might pass by such acts without remonstrance, but when as is usual, nothing is paid to them, it seems hard upon these brain-worked men that they are to receive not a cent for their works sold in America. And it is hard upon foreign pnblishers that after paying authors for their manuscript and issuing their works in good style, they must necessarily be underbidden in America by those who publish the same works with only the outlay for type-work, press-work and binding.

So long as this is not an infringement of the law, it cannot be called literary piracy, but it is so morally, and publishers should be restrained from such injustice, by equity and right, as well as by law. As all American publishers act thus, such criticism is as apposite for all as for any one of them; at the same time, as all do what is thus condemned, any criticism of the act can not justly be regarded as personal in character and object.

If "the thing," must be done, American readers will be glad to have the books issued in paper covers, so as to give them an opportunity of buying at the least cost possible, and of having their library bound in a uniform manner. Would not the same rule be welcomed by the profession in the publication of works of American authorship. Nothing is so agreeable to the student as a library neat and uniform in appearance and binding. As it is now, almost every new book differs in size, appearance, color and binding from its predecessor, and the library shelves look almost as though a curtain colored like Jacob's coat, were suspended in front of them.

This book is well printed and neatly issued; a great improvement on those which have previously appeared, some of which have been issued on such flimsy and very thin paper as to be almost illegible. When a work has reached its fourth edition, the reviewer has but little to say.

The author claims that his volume is "A Clinical History of Ganglionic Diseases," and while there is entirely too much of theory in a work intended to be clinical, there is no one who will fail to be interested in the theories as well as the practice of the author. The tables given are of decided statistical value, and the cases reported are instructive as well as interesting. The treatment of the author is given in detail, and this part of the work is especially valuable. The price of the work places it within reach of all—75c. for the paper-covered volume, and $1.25c. for that printed in cloth.

WORKING BULLETIN FOR THE SCIENTIFIC INVESTIGATION OF QUEBRACHO. A PLAN TO PROMOTE PROGRESS IN THE SCIENCE OF PHARMACOLOGY. Sent out by the Scientific Department of Parke, Davis & Co., Detroit, Mich. Pages 50, illustrated.

This is one of a series of valuable and instructive manuals recently prepared and sent out by the Scientific Department of the well-known house mentioned. This work, like those which have preceded and followed it, treats of a comparatively new and but little studied drug. The following subjects are taken up and presented with great care and fidelity: Botanical origin remarks upon its species, history, description, microscopical structure, history of its growth and development, chemical composition, adulterations and substitutions, pharmaceutical preparations, physiological action, therapeutie properties, reports of private and hospital practice. The appearance and microscopical structure are illustrated by carefully prepared lithographs. Any one who will apply will receive copies of these instructive and interesting serials.

CONTRIBUTIONS TO PRACTICAL GYNÆCOLAGY. By Dr. S. James Donaldson. J. H. Vail & Co., 21, Astor-place, N.Y.

This is a paper-covered volume of 134 pages. The pamphlet is chiefly interesting or noteworthy from the fact that the author's methods of treatment are novel at least, if not heterodox. They differ entirely from those of the leading gynæcologists, particularly in the treatments of dysmenorrhœa, and the deflexions of the uterus.

CAUSES OF DEAFNESS AMONG SCHOOL CHILDREN, AND ITS INFLUENCES ON EDUCATION, WITH REMARKS ON THE INSTRUCTION OF PUPILS WITH IMPAIRED HEARING, AND ON AURAL HYGIENE IN THE SCHOOLS. By Samuel Sexton, M. D., Aural Surgeon to the New York Eye and Ear Infirmary, Member of the American Otological Society, etc. Circular of Information of the Bureau of Education, No. 5, 1881, Washington: Government Printing Office, 1881..

If the Bureau of Education had never done more than to issue this publication it would have accomplished a most praiseworthy record. The book was written by Dr. Sexton, at the request of the Hon. John Eaton, Commissioner. It is a complete manual of school hygiene. His descriptions of the anatomy of the ear, with descriptions also of the physiological functions of the organ are very superior indeed, and to make these excellencies more excellent, there are furnished superior wood-cut illustrations.

The causes of deafness are described carefully and well. The evils resulting to a deaf child at school are graphically told, and the not less evils of a deaf teacher are told equally well. The pernicious effects of having a school house in a noisy neighboorhood are clearly and interestingly set forth.

The author administers a timely and scathing rebuke to those School Commissioners who foolishly, even criminally, leave the interior construction of school houses to political contractors, who are usually as base and reckless as they are ignorant. The author's own words are best; he writes as follows:

"When we are appealed to as humanitarians to provide hospital accommodations for the poorer class, no means are spared in the planning and erection of healthful buildings for their use, but when school houses are to be constructed—when both body and mind should be aided in development; prepared, I may say, to enter the struggle for the 'survival of the fittest'—their erection is, I fear, too often entrusted to the political contractor, whose knowledge in building is chiefly confined to 'making it pay'."

The reader will be fortunate if he can obtain from Washington a copy of this excellent publication. It has probably been distributed broadcast to the ignorant and inappreciative voter, but it is hoped that this may be an error, and that each eader may obtain a copy of it.

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BOOKS RECEIVED.

"Treatment of Consumption." By M. L. James, m.d. Richmond, Va. 1882.

"Medical College of Virginia," 45th Session, 1882–3.

"Some Thoughts on Phthisis." By M. F. Coomes, m.d. Louisville, Ky. 1882.

"Transactions of the Medical Society of the State of West Virginia. Fourteenth and Fifteenth Annual Sessions, 1882. Wheeling, W. Va.

"Transactions of the Medical and Chirurgical Society of the State of Maryland." Baltimore, Md., April, 1882.

"Tonsillotomy and Its Complications by Hæmorrhage." By N. A. Powell, m.d. Edgar, Ontario. 1882.

"Observations on Strabismus." By M. F. Coomes, m.d. Louisville, Ky. 1882.

"Some Observations on the Therapeutic Use of Alcohol." By Alfred K. Hills, m.d. New York. 1882.

"President's Annual Address," before the State Medical Society of West Virginia. Dr. James E. Reeves, President. Wheeling, W. Va. 1882.

"Labor Among Primitive Peoples." By Geo. J. Engelmann, a., m.d. St. Louis, Mo. 1882.

"Extensive Ravages from Lupus." By J. J. Chisolm, m.d. Baltimore, Md. 1882.

"Combined Intra-Uterine and Extra-Uterine Twin Pregnancy." By. B. B. Browne, m.d. Baltimore, Md. 1882.

"Report Ophthalmiology." By J. J. Chisolm, m.d. Baltimore, Md. 1882.

"The Medico-Chirurgical College of Philadelphia." 1882.

"Annual Announcement of Memphis Hospital Medical College." Memphis, Tenn. 1882.

"Contributions to Practical Gynæcology." By S. J. Donaldson, New York. 1882.

"Double Irrigation and Drainage Tubes." By Henry O. Marcy, a.m., m.d. Boston. 1882.

"Official Report of the Post-Mortem Examintion of Chas. J. Guiteau." By Z. T. Sowers, m.d., and J. T. Hartigan, m.d. June, 1882.

"Annual Announcement Louisville Medical College." Louisville, Ky. 1882.

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MISCELLANEOUS.

Another Broken Neck Cured.—About five months ago a teamster named John Collery attempted to drive his team through a barn door, and in doing so had his head forced down upon his breast until his neck was broken. Police Surgeon Stambaugh made an examination of the injured man, and found that his seventh cervical vertebra was fractured, and that the spinal cord had been stretched out nearly two inches.

After his removal to his home, Collery states that he was laid flat on his back with a sort of fence about his neck and head, which kept him immovable for over two months. Both the body of the vertebra and the arching laminæ were discovered to be broken, and the operation of joining them together without pinching the spinal cord where it had sagged between the ragged edges as described, is one of the most difficult ever performed. For a month the patient lay on his back completely paralyzed in one-half of his body, and but little feeling in the other. If he moved in the slightest degree during the first fortnight he could plainly feel the jagged edges of the bone grate together, and for hours after such an attempt he was content to lie on his hard bed without attempting to move a muscle for fear that the spinal cord should be crushed, and his existence ended in a twinkling.

The straightest position attainable was required, and to this end Dr. Stambaugh was compelled to refuse him a mattress, forcing him to lie on a wide plank. Collery says that before his eight weeks of enforced quietness was ended he thought the board was made of adamant. The most dangerous time experienced, he says, was one day when an attendant told him that a man whose neck could stand breaking as his had was not born to be hanged. His desire to laugh was irresistible, and the shaking up his merriment gave him caused his fastenings to burst, and the fracture came near breaking afresh. During the first five weeks he did not move a foot from his first posture.

The paralysis has now almost entirely disappeared, and Dr. Stambaugh yesterday promised him that he would be able to go to work within six months. The average fatality in cases of clearly-defined fracture of the neck is estimated at 990 in 1000.—*Ex.*

VENEREAL DISEASE IN A CHASTE WIFE NOT NECESSARILY COMMUNICATED BY A HUSBAND.—A Michigan woman (*Northwestern Reporter*, January 21, 1882), attempted to get a divorce from her husband on the grounds of his extreme cruelty in giving her venereal disease. He was shown to be free from it. She was admitted by him to be chaste. The court decided that the disease might be innocently acquired, and its existence in a chaste wife was no evidence that her husband had infected her. This decision is decidedly in accord with medical science and commonsense.

According to Dr. Squibb, "St. Jacob's Oil" is a badly-made aconite liniment. It consists mainly of water, ether, alcohol, turpentines, and a small proportion of aconite, with red coloring matter. As a means of making money for the enterprising merchants who own it, it certainly is not a delusion or a snare.

IODOFORM IN TOOTHACHE.—Schaff, in the *Deutsch. Med. Zeit.*, No. 12, recommends iodoform, on account of its gently caustic action, as an anodyne application to exposed tooth-nerves. The circumstance that a single or repeated application of iodoform does not produce any irritation, much less any inflammation of the periosteum, and the double function of the remedy as a cleansing and disinfecting agent, make it especially appropriate as a caustic, particularly before the introduction of a temporary filling. The author uses a paste consisting of iodoform, powd., grs., 60; kaolin, grs. 60; carbolic acid, grs. 8; glycerin, q. s.; oil of peppermint, gtt. 10. Triturate the iodoform, kaolin, and oil of peppermint with enough glycerin to form a thick paste.

MAN AND THE BRUTES.—Dr. Lindsay, in his recent book on "Mind in the Lower Animals," remarks that, "even as regards man himself, it must be borne in mind that there are countless thousands—many whole races—that are intellectually and morally the inferiors of many well-trained mammals, such as the chimpanzee, ourang, dog, elephant, or horse; or birds, such as the parrott, starling, magpie, jackdaw, and various crows."

WOMAN'S LOGIC.—A party of vegetarians who were boarding at a "hygienic" establishment, while taking a walk in the fields, were attacked by a bull which chased them furiously out of his pasture. "That's your gratitude, is it, you great hateful thing?" exclaimed one of the ladies, panting with fright and fatigue. "After this I'll eat beef three times a day!"

Absorption of Sequestra.—M. Vrignal has lately made a series of experiments on the absorption of sequestra. He has determined that a séquestrum covered with pus will not be absorbed, whilst one enveloped in granulations will be. A fragment of bone (a bone peg) being driven into the tibia of a rabbit was almost entirely absorbed.—*Gaz. des Hopitauz.—St. Louis Medical and Surgical Journal.*

Persistence of the Ductus Arteriosus.—Dr. Malherbe (*Journ. des connais. Med.*) cites several cases in which this mal formation existed without producing characteristic symptoms during life, and enumerates, on the other hand, the symptoms which may fairly lead us to suspect it when they do exist.

The presence of a rough, prolonged murmur, systolic, or changing from systolic, diastolic and having its maximum intensity at the level of the third left costal cartilage, and propagated up towards the left clavicle, justifies, the diagnosis of persistent ductus. The murmur may be accompanied by either a general or a local cyanosis. It differentiates itself from that caused by an immediate communication between the pulmonary artery and the aorta, inasmuch as the latter produces a murmur of an intense thrilling character heard all along the hollow of the back, and loudest of all at the level of the transverse aorta) third and fourth dorsal vertebræ).

Persistent ductus is compatible with perfect development, strength, health and long life.

One case quoted (age 28) was highly cyanotic, yet the patient was capable of severe and prolonged toil without respiratory difficulties. Another, a lady of 50, had never complained of anything leading to suspicion of malformation, which was only discovered post-mortem.—*Practitioner*, August, 1882.

Where the House Fly Breeds.—As "fly time" approaches every housekeeper wonders where and how the tincreasing swarms of pests multiply so rapidly. The eggs, mere whitish specks to the unaided eye, are laid in little agglutinated piles in warm manure or in decomposing vegetation, especially that about our stables and barn-yards. From 80 to 100 are laid at a time, and probably at three or four different intervals by the same fly, though on this point we have no exact data. Within twenty-four hours in summer, they hatch into footless maggots, which, after rioting in filth till their tender skins seem ready to burst from repletion, become full-fed in less than a week, and descending into the earth, or sheltering under some old board, contract to brown, shining objects, rounded at both ends, and technically known as puparia. Within the darkness of this hardened skin profound changes rapidly take place, and the insect passes through the pupa to the perfect state, and finally, in about five days, the anterior end of the puparium is pushed off, and the fly quickly crawls out. At first its parts are pale and soft, and its wings are crumpled and useless, but these soon expand, and suddenly, without practice or teaching, the new-fledged fly wings its way to your table to mock your displeasure—to share your repast. The length of time required from hatching to maturity varies with the season and temperature, but will not exceed ten days in midsummer, while the life of the perfect fly lasts about three weeks at the same season. As cold weather approaches propagation ceases, and the older flies perish. A few of the more vigorous females, however, retreat to some nook or cranny, where, in a state of torpor, they survive until the ensuing season—links 'twixt the summer gone by and to come. The insect may also hybernate in the pupa state in the ground. In rooms kept continuously warm, or in more southern latitudes, the fly remains active all winter, and our palace sleeping cars bring them daily to us from Florida in the coldest months of the year.

Obesity in a Child.—Dr. Hillairet exhibited in Paris, not long ago, a girl, five years old, who weighed one hundred and twenty-four pounds, and measured four feet round the waist. The child was healthy in other respects, but somewhat scant of breath.

Dr. A. J. Fuller, of Bath, U. S., reports a case of ascites which was tapped no less than forty-three times within a period of one year and three-quarters. The total quantity of fluid removed at the several operations was 1420 pints. The patient, a married lady, aged sixty-five, died a fortnight after the last operation.

Migrations of Ovum.—To settle the question whether or not it is possible for ova to travel across the peritoneal cavity or that of the uterus, Dr. Leopold, of Leipsic, has performed some important experiments. In these he made use of eight rabbits. In each case he opened the abdomen, tied the right Fallopian tube in two places and cut out the piece between the ligatures; the left ovary was carefully removed, then the abdominal wound was closed. After thorough recovery each animal was put to the male. In six cases the result was entirely negative, but in two pregnancy followed. The abdomen of the latter was opened; in one four placentæ were found in the left horn of the uterus, and one in the right. He thinks these experiments settle the question. In these rabbits ova could only reach the uterus by traveling across the peritoneum from the right ovary to the left Fallopian tube; and could only get into the right horn of the uterus by passing down the left horn and up the right. They prove, therefore, that it is possible for ova to migrate, not only across the peritoneum, but across the uterine cavity.—*Medical Times and Gazette.*

Thought Reading.—A meeting, at which Dr. Crichton Browne presided, and which was attended by a number of scientific and literary men, was held at the Marlborough Rooms, London, to witness an exhibition of the phenomena of "thought-reading" by Mr. Stuart Cumberland. That gentleman, with great promptitude and precision, went through the usual performance of finding articles that had been hidden during his absence from the room, of spelling out words thought of by the subjects of his experiments, and of disclosing the date of birth of several members of his audience. At the close of his demonstations, Monsignor Capel, Professor Ray Lankester, Dr. Hack Tuke, Dr. Simpson, and others, complimented him on the success which had attended them, and expressed their conviction that his power in "thought-reading" was superior to that of any professor of the art who had as yet appeared in London. Professor Groom Robertson said that, having been a member of a small committee which investigated the pretensions of Mr. Bishop as a thought-reader about twelve months ago, he could testify confidently that Mr. Stuart Cumberland was correct in his interpretations or readings in a larger proportion of instances than Mr. Bishop; and that there was this great difference between Mr. Bishop and Mr. Cumberland, that, while the former always left it to be understood that he was aided in his experiments by an occult force or mysterious influence which he could not himself comprehend, the latter acknowledged that he was aided in all his revelations simply by naturally quick and highly trained perceptive faculties, and that he was guided entirely in his explorations and discoveries by movements in the hands which he held or pressed to his forehead. Monsignor Capel said that "thought-reading" or "willing" is practiced in hundreds of drawing-rooms in London; and the chairman expressed his belief that Mr. Cumberland is engaged in a salutary work in exposing the impositions of charlatans, and the superstitions of weak-minded enthusiasts. Some spiritualists who were present did not seem inclined to accept Mr. Cumberland's account of his own extraordinary powers, but were evidently disposed to regard him as a clairvoyant, in spite of his disclaimers, and of his plain-spoken denunciations of spiritualism in all its manifestations.

Malaria on Onion Creek.—"How are the colored voters coming on out on Onion Creek?" asked an Austin candidate of a darkey with a load of hay.

"Dar's a heap sickness out dar among colored folks."

"What is it, malaria?"

"I reckon dat's de name ob de stuff. Hit am sumfin what he got from de druggery shop."

"What stuff are you talking about?"

"De stuff a white man out dar puts in his watermillions to keep de colored folks from mistakin' 'em for dar own watermillions."—*Texas Siftings.*

Hypodermic Use of Amyl Nitrite.—Dr. J. J. Frederic Barnes thus writes in the *British Medical Journal*:—I have administered amyl nitrite hypodermically thirty or more times during the past eighteen months. In all cases a ten per cent. solution in rectified spirit was used. In no case did any untoward inflammatory or suppurative symptoms occur afterward. The action of the drug was immediate in every case, the subjective phenomena being like those experienced when using the ordinary methods of administration. The spirit solution appears to be an excellent preparation for use, as a small quantity kept in an ordinary stoppered bottle for some months retains its full efficiency at the present time. The dose usually administered has been ten minims of the solution, equal to one minim of amyl nitrite. In lumbago, where the patient is seen at the commencement of the attack, and the disease is not of long standing, the drug given in this manner instantly relieves the symptoms; a patient who is unable, previously to its administration, to bend the trunk without the most exquisite pain, five minutes afterwards can do so quite readily. In a case of paraffin poisoning, where the patient was in a state of collapse and almost pulseless, one administration (inhalation having been ineffectually tried) brought on an immediate resumption of cardiac function, the man speedily recovering. Its action on this case would, I apprehend, be due to the relief momentarily given to the congested centres by the peripheral hyperæmia induced. In another case, one of duodenal colic, the patient was found rolling on the floor, from the acuteness of the pain; when, on injecting fifteen minims of the spirit solution, the pain disappeared as if by magic, and the patient was at once able to resume his ordinary position. The value of this drug by ordinary methods of administration has already abundantly demonstrated how great a boon the discovery of Dr. Lauder Brunton is in the hands of the profession, notably in cardiac angina; and I feel confident that its utility may be still further enhanced by giving it hypodermically.

A Dinner Within a Statue.—A few days ago M. Bartholdi, the designer of the colossal statue of "Liberty Enlightening the World"—which is to be erected near New York in commemoration of the American War of Independence—entertained a party of his friends at luncheon. The table was laid in the lower folds of the drapery of the figure. MM. Gaget, Gauthier & Co. of Paris, the contractors for the erection of the statue, have been obliged to take a plat of ground adjoining their foundry, and covering 3,000 square meters, upon which the scaffolding has been fixed. The interior of the statue contains an iron backing, to which are attached the exterior parts, consisting of bronze plates, about one-tenth inch thick by 4 feet 7½ inches square—the largest size made in the trade. The plates are kept together by rivets that are invisible from the outside. The plates of bronze are made to correspond with the contours of the model in an ingenious way. A skeleton of fine wickerwork was first formed, and this was covered with a thick coat of plaster moulded to an exact reproduction of the original. Upon the plaster 6-inch templates of thin wood are adjusted, and are then given to the bronze workers for models. The weight of the figure will be about 150 tons; the height from head to foot about 110 feet; and from the end of torch raised in the right hand to the feet, 140 feet. The cost of execution will exceed £28,000, and the work will require five years for completion.

LUXATION OF THE CERVICAL VERTEBRÆ.—At the surgical clinic of Prof. Gussenbauer, on July 29th, a patient was presented, who, the day before, had fallen into a ditch, and struck on his head, which was violently flexed on his chest, producing a lateral subluxation of the second, third, and fourth cervical vertebræ. The entire cervical spinal column moved together, on attempts to move the head, causing great pain, while ateral movements of the head were impossible. Examined through the mouth, a marked depression was found opposite the second and third vertebræ. The reduction of the luxation, which is generally very dangerous, on account of the liability of compressing the spinal cord, was accomplished by continued extension of the head, by means of a weight, until the normal position and mobility of the neck were attained. Massage and passive movements, which were first tried, were of no avail.—*All. Weiner Med. Zeit.*, August 1, 1882.

PROF. VON LANGENBECK ON IODOFORM.—At a recent Congress of German Surgeons, Prof. Von Langenbeck spoke warmly in favor of this substance, not only for its power of diminishing secretion, but of relieving pain. In his cases he seldom had to employ more than five grammes, and only quite exceptionally, as much as fifteen grammes. One special advantage he had derived from it in plastic operations, was due to the soft elastic cicatrix which formed under the scab where it was used, so that transplantation often became superfluous. In a case of extensive nævus, which he had removed from the region of the lower eyelid (which formerly would have required a second operation to relieve the ectropion), a soft smooth cicatrix was left, which produced no deformity whatever.—*Medical Times and Gazette from Deutsche Med. Woch.*, June 24.

PROFESSOR ESMARCH ON THE CASE OF PRESIDENT GARFIELD.—Professor Esmarch delivered a lecture on the treatment of President Garfield's wound before the Physiological Society of Keil in February last. This lecture he has now printed and circulated, and it is impossible that the views of a surgeon so accomplished and so worthy of expressing an opinion on such a case should not be canvassed. The facts of the case are first of all clearly and fairly stated from Dr. Bliss's own published accounts of the progress of the case and of the post-mortem examination. Professor Esmarch's conclusions are (1) that the wound was not in itself absolutely fatal; (2) that the bullet was not the cause of the septic suppuration in the wound which led to the fatal result; (3) that the cause of the septic suppuration was introduced from without, and that as contributing directly or indirectly to this were the following errors in the treatment—the repeated probing and examination of the wound with instruments and fingers not rendered aseptic, the failure to dress the wound aseptically, the syringing out of the wound with fluids not sufficiently antiseptic, and the failure to give a complete vent to the "bagging" pus; (4) there was no true pyæmia, but only metastatic inflammation of the parotid gland; (5) the cause of death was hæmorrhage, moderate in amount, but occurring in one whose strength was undermined by septic fever, decubitus, bronchial catarrh, and hypostatic pneumonia; (6) although the splenic artery may have been injured primarily by the bullet, or by a splinter of bone, this would not have led to the formation of a false aneurism except for the establishment of putrid suppuration. In conclusion, Professor Esmarch refers to the popular superstition that the bullet is the cause of all danger in a gunshot wound, and that to extract the bullet should be the chief aim of the surgeon. He asserts that most of the secondary dangers arise from the fingers of those who explore the wound, and that the American surgeons committed the error of doing too much than of doing too little, as they have frequently been accused of at home. Finally, he surmises that if no search had been made for the ball, and the wound had been dressed aseptically, the unfortunate patient would have been alive now. Valuable as is Professor Esmarch's opinion on such a point, we regret that this lecture has been published, at any rate so soon. It would not have lost in value by being kept back until the acrimonious discussions on the conduct of the attending surgeons had died out on the other side of the Atlantic. It is proverbially easy to be wise after the event, and it is an ungraceful task to criticise adversely the conduct of men who, under very trying circumstances, were suddenly called upon to act in a grave emergency. We are willing to admit that mistakes may have been committed, but it is a case in which the golden rule is eminently applicable: "Let him that is without sin first cast a stone."—*Lancet.*

THE CITY CHARITABLE INSTITUTIONS.—A census of our city charitable hospitals for the past year shows the following number of patients:

Bellevue Hospital, 680; Charity Hospital, 970; Incurable Hospital, 104; Homœopathic Hospital, 617; Hart's Island Hospital, 247; Randall's Island Hospital, 742; Almshouse Hospital, 120; Maternity Hospital, 748; Infant's Hospital, 200; Workhouse Hospital, 56: Emergency Hospital, 4; Colored Home and Hospital, 50; Emigrant Hospital, 1,200; Riverside Hospital, 70. Total in city hospitals, 5,108.

The private hospitals have a capacity about as follows: New York Hospital, 150; Chambers Street Hospital, 26; St. Luke's Hospital, 170; St. Vincent's Hospital, 150; Sr. Francis' Hospital, 200; St. Joseph's Hospital, 25; German Hospital, 125; Mount Sinai Hospital, 160; Roosevelt Hospital 180; Presbyterian Hospital, 100; Women's Hospital, 120; Hospital for Ruptured and Crippled, 200; Nursery and Childe's Hospital, 200; St. Mary's Free Hospital for Children, 70; St. Elizabeth's Hospital, 65; Trinity Infirmary, 34; New York Eye and Ear Infirmary, 20; New York Ophthalmic and Aural Institute, 30; Manhattan Eye and Ear Hospital, 30; New York Infirmary for Women and children, 30; Metropolitan Throat Hospital, 25; Harlem Hospital (?); French Hospital, 22, Hahnemann Hospital, 70; Bedloe's Island Hospital, 100. Total capacity of private hospitals, 2,302. Total of all hospitals, 7,410. Lunatic Asylum, Blackwell's Island, 1,389; Insane Asylum, Ward's Island, 1,260; Branch Asylum, Hart's Island, 362. Total, 3,021.

WOUNDS OF THE HEART.—A recent leading article in the *Lancet* shows the fallacy of many popular and even medical opinions respecting the absolute fatality of wounds of the heart. According to this article there is no case of absolutely instantaneous death from cardiac wounds. Wounds of the apex only kill within an hour after the wound has been inflicted. In one instance cited, a man lived twelve hours after the heart had been bisected by a saber. Out of twenty-nine cases cited in the article in question, only two died within forty-eight hours after receiving the wound. The others lived from four to twenty-eight days; death resulting in most cases from avoidable complications. Recovery may take place even when the wound is extensive for a bullet has been found imbedded in the muscular wall six years after the receipt of the injury; the patient dying from a disease entirely disconnected with the cardiac wound.—*Chicago Me. Review.*

INFLUENCE OF EARLY FEEDING UPON VITALITY.—Investigations made in Germany concerning the comparative vitality of children under various methods of feeding exhibit some peculiar results. Thus, of 100 children nursed by their mothers, only 18.2 died during the first year; of those nursed by wet nurses, 29.33 died; of those artificially fed, 60 died; and of those brought up in institutions, 80 died to the 100. Again, taking 1000 well-to-do persons and 1000 poor persons, there remained of the prosperous, after five years, 943, while of the poor only 655 remained alive; after fifty years there remained of the prosperous 557, and only 283 of the poor; at seventy years of age there remained of the prosperous 235, and but 65 of the poor. The total average length of life among the well-off class was found to be fifty years, as against thirty-two among the poor.

A Dangerous Cigar Lighter.—Street hawkers have lately taken to selling a "magic cigar lighter," which is calculated to do much mischief. As every student knows, the affinity of sodium for oxygen is so great that it will take the coveted element from water with such rapidity as to cause it to burst into flame. The new lighter is a thin strip of sodium, a fragment of which, when placed on the end of a cigar and touched with water, burned with great vehemence. Few of those who buy the little vials of lighters are aware what vials of wrath they may turn out to be if unskilfully handled. The burning sodium will make an ugly wound if it comes in contact with the skin, which is likely to happen from the sputtering way it has. A sweaty finger is enough to set the stuff ablaze, or a sweaty pocket, should the cork of the bottle chance to come out. As the lighters are bought chiefly by the ignorant, who are taken by the seeming miracle of producing fire by the direct action of water, it is a wonder that no serious accidents with them have been reported. The traffic is not one to be encouraged.

Hot Springs Doctors.—Now let me say there are a good many physicians here who pay for all the patients they get. They have no professional standing in the community, and employ the hotel drummers to bring them business, giving fifty per cent. of what they get to the "roper" or "steerer." These hotel drummers are the sharpest men in the town, and are excellent judges of human nature. When they get a visitor to their boarding houses they find out what doctor the man desires to consult, and then tell him that the doctor is either dead, moved away, a drunkard, or will make any other false representation that may suffice to hoodwink the victim for a few hours, or until they have an opportunity to "show him around the town" and sell him to some drumming doctor. I would suggest to all who read this article that they give to their friends who visit this place a note of introduction to some respectable resident physician here. We certainly have a dozen good reputable men in the town who would be an honor to the medical profession anywhere.—*T. T. Jelks, M. D., in Atlanta Medical Register.*

Professor Edward C. Pickering, of Harvard College, says that, in undertaking to measure the intensity of the light of the satellites of Mars, he had occasion to need an extremely small hole. A hole that was the twenty-five hundredth part of an inch in diameter was finally secured.

Sacred Well of Mecca.—Prof. Franklin gives an analysis of the water contained in the sacred well of Mecca. It contains 579 grains of solid matter to a gallon, or impurities about seven times greater than London sewage. The water is distributed among Mohammedans who drink it. Cholera and other diseases might be attributed to this cause did not their faith save them.

Poisoning from Red Stockings.—Dr. J. Woodland writes to the *Lancet* that, having had his attention called to several cases of great irritation of the feet and legs, causing small pustules to arise and the skin to subsequently exfoliate, and suspicion being fastened upon red stockings which the patients wore, he carefully analyzed them. He found a tin salt which is used as a mordant in fixing the dye. He succeeded in obtaining as much as 22.3 grains of this metal in the form of the dioxide, and as each time the articles are washed the tin salt is rendered more easily soluble, the acid excretions from the feet attack the tin oxide, thus forming an irritating fluid.

An Opportunity for the Muse.—One morning a man called on Longfellow, and, forcing his way past the servant who had opened the hall-door, burst in on the presence of the astonished author in his library. "Mr. Longfellow, you are a poet, I believe." "Well, sir, some persons have said so." "All right, Mr. Longfellow. Poet it is! Now, I've called here to see if I couldn't get you to write some poetry for me to have printed and stuck on to my medicine bottles. You see, I go round sellin' this medicine, and, if you'll do it, it'll help me immensely; and I'll just tell you right now, if you give me the poetry I'll give you a bottle of the carminative—and it's a dollar a bottle."

New Method of Detecting Stone in the Bladder.—In the *Lancet* of July 1st Mr. Davidson states that the attachment of a rubber auditory tube to the sound, connecting it with the ear of the surgeon, greatly facilitates the discovery of calculi. —*Ex.* [Ten years old.—*E. S. G.*]

Effects of Malaria on Man.—In addition to the direct effects of malaria, a diathetic condition seems to be established which modifies other diseases. The effects of malaria are, indeed, most protean in form, not only in its own definite and well-marked pathological process, but it stimulates others. The stupor of typhus, the collapse of cholera, the high temperature of insolation, the sickness of an irritant poison, the convulsions of epilepsy or of dentition, may occur in the pernicious forms. It induces anæmia and general cachexia, with structural changes in the liver, spleen, or other viscera, neuralgia, asthma, and various other symptoms of disturbed innervation and sanguification, and it also appears to be in close etiology with dysentery, cholera, diarrhœa, beriberi, hydrocele, elephantiasis, bronchocele, and hepatic disease. Whatever its nature may be, its action on the human economy is very striking; it affects the central nervous system, causing disturbance of vaso-motor, action, paroxysms of fever, and congestion of the abdominal viscera, which may become periodic in recurrence, or pass on to structural changes in the liver and spleen, or intestinal mucous membrane. No one can have resided long in a malarious climate, such as Assam, without observing the cachectic, deteriorated aspect of the people, who, although they may never have had a single attack of fever, scarcely feel ill, and would resent being told so, are yet victims to the insidious action of the poison, and present evidences of anæmia, degenerate tissue and chronic visceral disease.—Croonian Lectures. Sir Joseph Fayrer, M.D., F.R.C.S., in *Chicago Medical Journal and Examiner.*

Will Quinine Produce Abortion?—Dr. Otis Manson (Trans. Va. Med. Soc., 1881, *Maryland Medical Journal*) says that from an experience of forty years in the treatment of malarial fevers, he is confident that M. Petit Jean mistook a consequence of the intermittent fever for a result of the action of quinine, and that in his opinion quinine not only will not produce abortion, but that when properly administered it is a preventive of this unfortunate occurrence. He says that at the commencement of his career, when he was timid in the administration of quinine, abortion was no uncommon occurrence in pregnant women attacked with the various types of periodical fever, and to whom no quinine had been given. Abortion is, according to this author, a frequent occurrence in fevers of all descriptions, and the female may consider herself fortunate in passing through the commotion of any fever without a premature expulsion of the fœtus. Since he commenced to employ quinine in liberal, yet reasonable doses, in paroxysmal fevers, he has never observed abortion in patients affected with them. The author argues that it is reasonable to suppose that an agent which, when properly administered, will prevent the convulsive rigors of the cold stage, and the high fabrile excitement of the exacerbation which follows, would be the best means of preventing abortion in those subject to such violent disturbing influences.

IODIA.—W. C. R., of Rockton, Ill., is making inquiries for the formula of iodia, a proprietary medicine employed quite extensively by the profession, and the formula of which purports to be published on the label. It seems that this gentleman has been attempting to reproduce the prepreparation from the formula as there published, but without success. So it seems that he then wrote to the owner of the compound, and also to the editors of the Druggists' Circular, but we judge from the following quotation from that journal that he received little satisfaction in either case: "The formula for iodia which you mention is apparently defective in some respects, but where the fault lies is more than we can tell. If the originator of the formula himself is, as you say, unable or unwilling to explain it, we cannot pretend to be wiser." We have a number of times pointed to the fact that the true formula of the proprietary compounds advertised to the profession are not published, and have called attention again and again to the importance of its bearing on medical literature. What will become of the literature of therapeutics if pharmacy becomes a lost art through lack of publication?—*Ther. Gazette.*

TENACITY OF LIFE OF BACTERIA.—The demonstration of the intimate relation of bacteria to certain fevers and other diseases would seem at first sight to greatly simplify the work of the physician in searching for efficient remedies. Put in plain English the problem is: find some element or compound that is fatal to bacteria, and administer it in the way best calculated to reach the mischievous fungi in the patient's blood. But the problem is easier stated than solved. The lower forms of life which appear to cause the trouble are able to live and thrive under the widest possible range of conditions; so that, so far as known, any reagents that will kill them would be much more quickly fatal to the patients.

The eminent English chemist, Edward Frankland, recounted the other day, at a meeting of the Society of Arts, some experiments made in his own laboratory, showing the indifference of bacteria to conditions that would speedily destroy higher organisms.

A quantity of mutton broth was affected by bacteria, and when swarming with these organisms, it was introduced into a vessel filled with mercury, and standing over that liquid. Then various gases were put into these globes, and, of course, in contact with this liquid teeming with bacteria. Oxygen was tried, hydrogen, nitrogen, carbonic acid, and all the ordinary gases, some of which were respirative by animals, and some of which were believed to be beneficial to plants; but the bacteria seemed to delight equally in either of them. They get on quite as well in carbonic acid as they did in oxygen; they could live for weeks without the presence of a trace of oxygen in the liquid, with nothing but pure carbonic acid.

If the experiments had gone no further, they would show that these organisms had an extraordinary tenacity of life. But cyanogen was now introduced into the flasks, and, although they certainly did sicken a little under it, they recovered a little in the course of a week or so, and went on living in that gas in a fairly healthy condition. Sulphurous acid—the mutton broth itself being, of course, saturated with gas, and the atmosphere of the glass globe consisting of nothing else but sulphurous acid—seemed to have very little effect on them at all; their motions were not stopped, and they seemed to be as lively after the application of it as before, and the same was the case with several other reagents which were tried.

It is barely possible that these vicious organisms may be reached and killed by some drug in doses which the human system can tolerate; but the prospect certainly is not bright. Prevention rather than cure seems to be the end best worth working for.

THE MEDICINAL VALUE OF VEGETABLES.—A celebrated cook book discusses the medicinal value of vegetables as follows: "Asparagus is a strong diuretic, and forms part of the cure for rheumatic patients at such health resorts as Aix-les-Bains. Sorrel is cooling, and forms the staple of that *soupe aux herbes* which a French lady will order for herself after a long and tiring journey. Carrots, as containing a quantity of sugar, are avoided by some people, while others complain of them as indigestible. With regard to the latter accusation, it may be remarked, in passing, that it is the yellow core of the carrot that is difficult of digestion—the outer, a red layer, is tender enough. In Savoy the peasants have recourse to an infusion of carrots as a specific for jaundice. The large, sweet onion is very rich in those alkaline elements which counteract the poison of rheumatic gout. If slowly stewed in weak broth, and eaten with a little Nepaul pepper, it will be found an admirable article of diet for patients of studious and sedentary habits. The stalks of cauliflower have the same sort, only too often the stalk of a cauliflower is so ill-boiled and unpalatable that few persons would thank you for proposing to them to make part of their meal consist of so uninviting an article. Turnips, in the same way, are often thought to be indigestible, and better suited for cows and sheep than for delicate people; but here the fault lies with the cook quite as much as with the root. The cook boils the turnip badly, and then pours some butter over it, and the eater of such a dish is sure to be the worse for it. Try a better way. What shall be said about our lettuces? The plant has a slight narcotic action, of which a French old woman, like a French doctor, well knows the value, and when properly cooked it is really very easy of digestion."—*Medical Record.*

THE TEETH OF THE YAKUTS.—The *Herald* correspondent with the party in earch of the lost crew of the Jeannette finds among the natives of northern Siberia the "most beautiful teeth in all the wide world." He says: "Three hundred versts from Yakutsk I have seen old men of sixty and seventy with sets of teeth small and pearly-white and polished and healthy as those of the handsomest American girl of sixteen. Decay and suffering and unsightliness and loss are actually unknown. A physician of Yakutsk tells me that he believes the reason of this phenomenon is to be found in the habits and the kind of food eaten by the natives, as well as to a certain care taken by them from childhood up. In the first place, the Yakuts do not touch sugar in any form, for the simple reason that they cannot afford to purchase it. Secondly, they are in the habit of drinking daily large quantities of fermented sour milk summer and winter, which is anti-scorbutic and is very beneficial in preserving the teeth. And lastly, they have the habit of chewing a preparation of the resin of the fir tree, a piece of which, tasting like tar, they masticate after every meal, in order specially to clean the teeth and gums of any particles of food that may remain after meals. The gum or resin is prepared and sold by all apothecaries in Siberia, and is much used by Russian ladies. The fermented milk is said to be a not very savory drink. First, the milk is cooked, and then put into a large vase-shaped utensil made of frozen cows' dung, in which it is allowed to ferment until the winter, when it is broken up into blocks and preserved for use in the cellar all the year round."

STRETCHING OF THE OPTIC NERVE.—The first attempts at stretching this nerve were made by Wecker, only one of whose cases, an unsuccessful one, was reported. Dr. Kümmell (Deutsche Medicinische Wochenschrift, No. 1, 1882), after experiments on animals and on the cadaver has satisfied himself of the harmless nature of the operation. This consists in passing a blunt spatula shaped instrument through an opening in the conjunctiva at the inner border of the cornea to the point of insertion of the optic nerve after tenotomizing the internus. Dr. Kümmell, however, prefers planting a blunt strabismus hood in between the inferior and rectus. In seven cases operated on by him there were no serious consequences. Observations on the cadaver showed that tractions on the nerve produced an action extending as far as the entrance of the optic tract into the cerebral substance. In one patient, under treatment for a long time with potassium iodide and strychnine, there was improvement after the operations. Dr. Kümmell recommends the operation in slowly progressing atrophies weere some qualitative light sensation still remains in the eye.—*Chicago Rev.*

Pruritus Ani.—For twenty years I have suffered from that annoying disease, pruritus ani, and had placed myself under the care of various physicians at different times, but without the least benefit. About two years ago, I noticed a brief paragraph in the *Medical News*, to the effect that balsam Peru would relieve that trouble. I tried it, and it gave immediate and entire relief. The disease still clings to me; but, when it becomes annoying, a single application of the balsam affords relief. Of all the medicines which I have tried, this is the only one that has had any effect.—*Cin. Lancet and Clinic.*

Aphthous Vulvitis.—Dr.Parrot (L'Union Medicale, March 16, 1882,) claims very good results from the treatment of this affection, when occurring in young infants by painting the vulva each day thickly with iodoform, the labia being prevented from adhering by a small amount of charpie being placed between them. After the first application the vulvitis improves.

Therapeusis of Zinc.—Dr. Testa (Bulletin Générale de Thérapeutique, February 15, 1882,) after extended experimentation with hypodermic injections of a twenty per cent. solution of zinc sulphate, claims that zinc has a marked action on the heart diminishing cardiac contraction and reducing blood pressure. The decrease in blood pressure results from the zinc directly causing contraction of the blood-vessels. Zinc acts on the intra-cardiac termination of the pneumogastric producing arrest of the heart in diastole. It reduces peripheral sensibility, almost to the point of complete anæsthesia and at times produces motor paralysis. It reduces motor and sensory excitability, and hence is indicated in convulsive neuropatheis. From this action on the nervous system and from its reducing utero-ovarian hyperæmia, it is also indicated in hysteria. From its action on the heart zinc appears to be indicated in certain cardiac palpitations of nervous origin.—*Chicago Review.*

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MEDICAL NEWS.

There has recently been published by the local authorities a careful and true list of the drunkards who live in the town of Sainte Marie aux Mines, in Haute Alsace. The list embraces 31 persons, of whom the youngest is 23 years of age and the oldest 68. All inn-keepers are in future forbidden to sell intoxicating drinks to the persons whose names appear on this record. ——Paris has a commission for regulating the height of buildings, which are graded to correspond to the width of the street upon which they front. Houses may be forty feet high on streets twenty-five feet wide. In no case are they permitted to be over sixty-five feet high and only then when the streets are sixty-five feet wide or wider.——A modification of the Esmarch method of producing artificial bloodlessness is reported as having been in vogue for some time in Australia, where, indeed, it is supposed to be the genuine Esmarch method. A stout ring of small size, made of rubber tubing, is rolled up the limb from the extremity, driving the blood before it. When the desired height has been reached a pad of cloth is introduced under the ring, over the artery, to produce additional compression, and the ring remains *in situ* during the operation.——Dr. G. G. Woodward, U. S. A., who has been in Europe for some months by reason of failing health, has not improved much.——M. Saint Paul has offered the French Academy of Medicine a sum of $5,000 to found a prize for the discovery of a cure for diphtheria, the competition to be open to the world, and not confined to the medical profession.——The Pope of Rome is said to have decided to found a library in Rome for the use of Catholic scientific students and especially for the benefit of the Pontifical Academy of the Lincei. Several private collections have already been acquired, among them one that contains a rich collection of works on surgery, purchased at a cost of 25,000f.——Dr. Henry MacCormac has published a timely protest, penned with much vivacity and ingenuity, upon the Etiology of Tubercle, with comments on Dr. Robert Koch's Bacilli. The pamphlet is dedicated to Dr. Wilson Fox, and its aim is to show that the bacilli are themselves of secondary importance as compared with the real tubercle-generator —"rebreathed air."——Dr. Francis Atwood, of St. Paul, Minn., died at his home, last month, of typho-malarial fever. Dr. Atwood was Professor of Ophthalmology and Otology in the Minnesota College Hospital, and had a great reputation all through the Northwest in his special department. —— EMBALMING. — Experiments have been made at the New York morgue to test a process by which it is claimed dead bodies, though badly swollen and decomposed, can be restored to something like a natural appearance, and preserved so that it will be recognizable after months of burial. The subject operated upon was the corpse of an unknown woman who had died from erysipelas. It was soft, black and blue, and out of all human proportions. An incision was made in the right leg and an embalming fluid injected into the femoral artery. In less than half an hour the body assumed its natural size, became harder than in life, and as the degree of hardness increased the discoloration disappeared, leaving it of a marble whiteness. The body of a man, operated upon seven weeks before, had been kept unburied without decomposition. It retained a natural appearance, and was without odor.——A Mr. Cook, of Philadelphia, who died in 1846, in his will bequeathed 6,000 acres of wild land near Foxburgh, Penn., to the Pennsylvania Hospital and the Pennsylvania Institute for the Blind. For years these institutions have derived no income from the gift, and have been satisfied by the fact that it required no expenditure on their part. A week ago, however, oil was struck on the property, and there are hundreds of applications for leases of the land. The property is now estimated to be from two to five millions of dollars.——There are ten medical schools in the Dominion of Canada. The last one organized was at London. Three of these schools are French, the rest English.——The Russian Minister of Education finds the experiment of giving elementary instruction in medicine in the municipal schools of the capital answer so well that he has authorized its extension.——DR. BUCKNILL ON GUITEAU.—In the July number of *Brain*, Dr. Charles Bucknill gives a lengthy review of the Guiteau case, affirming the sanity and responsibility of the assassin, and criticising severely the opinions of Drs. Hammond, Folsom, Channing, &c.——The Longmans, of London, Eng., announce the issue in October of a Dictionary of Medicine, which has been several years in course of preparation. It will be a volume of over 1,800 pages. Its editor has so revised and altered the text as to bring it down to time of the real issue.——Sir Erasmus Wilson has presented to the Margate Royal Sea Bathing Infirmary, a new wing of the Infirmary to be named the Erasmus Wing, which he has built at a cost of over $150,000. The wing includes two large day rooms and four dormitories, each to contain sixteen beds, with a swimming bath capable of containing 15,000 gallons of sea water.——SANITARY CONVENTION.—A note has been received from Dr. W. H. Newell, the Corresponding Secretary, Jersey City, N. J., to the effect that there will be a Sanitary Convention at Indianapolis, Ind., Oct. 18th, at 9 o'clock, A. M. The Convention will consist of the National and State Boards of Health, through their duly appointed commissioners, and also of delegates from the American Public Health Association. The chief object is to secure a National Medical and Sanitary Exhibition in the year 1883. The "call" is made by very many of the most prominent health officers and physicians and by officers in the army and navy departments of the U. S. Every reader it is hoped will give to this great movement his aid and influence.——On July 6th, died Prof. N. Fredreich, in his 57th year. The cause of death was the rupture into the pleural cavity of an aneurism of the aorta. He is well known in this country by his articles upon diseases of the heart, in Virchow's hand book, on diseases of the larynx and nose, and a paper on the diseases of the pancreas in Ziemssen's Pathology. He was a teacher in the University of Warburg, and afterwards in the University of Heidelberg of pathology. In the latter place he also founded the *Psychiatric Clinic.*——The American Dermatological Association held its Sixth Annual Meeting at Newport, R. I., on August 30 and 31st, and September 1st.——CHAIR OF SURGERY IN THE UNIVERSITY OF EDINBURGH.—Mr. John Chiene has just been elected Professor of Surgery in the University of Edinburgh, to succeed the late Prof. Spence.——The Sultan of Turkey has given a site in Jerusalem for the purpose of erecting a hospice and ophthalmic dispensary under the auspices of the English branch of the Order of St. John.——"St. Jacob's Oil" appears to be a feeble and badly made aconite liniment, and it consists mainly of water, ether, alcohol, turpentines, and a small proportion of aconite, with red coloring matter. Its whole function is to make money for the enterprising merchants who own it, and in this it is by no means a delusion or a snare.—*Squibbs' Ephemeris of Materia Medica, Pharmacy, etc.*——Guiteau's skeleton is now at the National Army Medical Museum, but will not be exhibited to the public. The final disposition of the bones of the assassin has not yet been determined upon, and cannot be until Judge Hayner decides as to the validity of Guiteau's will, in which he bequeathed his body to Dr. Hicks. The experts who were engaged in the microscopical examination of Guiteau's brain have completed their work. It is understood that they fully agree in their conclusions respecting his sanity, and that there will probably be but one report rendered.——WOODEN CLOVES.—The *Madras Mail* mentions the the appearance in the market of artificial cloves, which remind one of the once celebrated wooden nutmegs of Connecticut. They are made of soft deal, stained a dark color, and flavored with oil of cloves. The counterfeit spice is said to have been imported into Zanzibar from the United States.——YELLOW FEVER IN MASSACHUSETTS.—Thomas J. Tolman, a young man residing in Charlestown was taken ill on his way to Lynn Thursday afternoon, and upon the arrival of the train upon the Central Station was unable to walk. He was taken to the Police station and examined by a physician, who stated he had every symptom of yellow fever. He was then removed to to the house of his uncle, George B. Tolman, No. 19 Summer street, where he was refused admittance by his relatives. Tolman was taken back to the Police station and from thence to the Alms-house. Before removing him to the latter institution a request was made for his admission to the Massachussetts General Hospital, which was also refused.——A CRITICISM.—London Aug. 11th.—The *Athenæum* says Prof. Esmarch, the eminent German surgeon, has published a lecture which he delivered before the Physiological Society at Kiel, on the treatment of General Garfield's wound. Prof. Esmarch's lecture was to the effect that General Garfield might have been alive but for the treatment he received.——Drs. Fordyce Barker and Thomas Addis Emmet of New York, H. P. C. Wilson of Baltimore, and George J. Engleman of St. Louis are spending their summer vacation in the old world. They will not visit Egypt.——The Philadelphia County Medical Society's Course of Lectures.—The Philadelphia County Medical Society has determined to institute an annual course of lectures on topics in medicine, surgery, and obstetrics, which shall be of general professional interest. The first annual course will be delivered during the ensuing winter by Professor Austin Flint, Sr., who has chosen for his subject, "Practical Points in the Physical Exploration of Visceral Diseases."——American Academy of Medicine.—At a recent meeting of the Council, the annual meeting of the Academy was postponed until Thursday, October 26th, when it will be held at Philadelphia, at the time of the Bi-Centennial Celebration in that city.—J. Dunglison, Secretary.——Mr. J. J. Milnes, a Huddersfield (England) solicitor, has obtained a verdict against the Corporation of that town, at the Leeds Assize, for £2000, as compensation for personal injuries caused by drinking impure water supplied by the corporation. The water in its passage through the service pipes had become so impregnated as to produce in the plaintiff's case every symptom of acute lead poisoning.——Nickel in Oregon.—At a recent scientific meeting in San Francisco announcement was made of the discovery in Southren Oregon of a large deposit of nickel ore, resembling that discovered in New Caledonia in 1864, the development of which by the French has so greatly extended the economical use of this metal. The New Caledonia minerals are known as garnerite and noumeite, both hydrated silicates of nickel and magnesia, occurring with chromo iron, steatite, and other minerals found only in serpentine. There are, likewise, two of the Oregon minerals, one dark, the other pale apple green, like those of New Caledonia, and closely corresponding with them in hardness and specific gravity.——Graduation of Homœopathists.—There are forty-six homœopathists in Illinois who are graduates of regular colleges. Of these five are graduates of Bellevue Hospital Medical College, Rush, University of Pennsylvania, Geneva, Jefferson and Nashville graduated four each. The University of Vermont, of Berlin, Chicago Medical College and Castleton, two each. The rest are graduates of Harvard, Bowdoin, Dartmouth New York City University, Albany, Starling and Buffalo. Notoriety was doubtless the chief reason for these conversions to homœopathy.——A MS. copy of Galen's work has been recently found in Salonica. It is somewhat injured by time, but 140 pages are in an excellent state of preservation.——Boylston Prize Essay.—One of the Boylston prizes awarded by the Harvard University has again gone to England. Mr. T. M. Dolan, Halifax, Yorkshire, has won the prize of 300 dollars (£61 5s. 9d.) for an essay on Sewer-gas, its Pathological and Physiological Effects on Animals and Plants.——The French Society for the Protection of Animals has protested against the cruelties practised in connection with the mode of providing frogs for the dinner-table in France. It appears that when caught the poor animals have the upper part of their legs—i. e., the edible portion—ruthlessly cut off with shears, the remainder of their bodies being carelessly thrown aside as useless. They are stated to have been found in their mutilated condition, several days afterwards crawling about on their fore-legs. It is time vivisection of this kind, merely to satisfy the appetite of gourmands, should be interdicted.——Dr. Robert Koch, accompanied by Dr. Struck, the Director of the Imperial Board of Health at Berlin, had an audience of the Emperor on June, 5 when he explained to his Imperial Majesty the results of his investigations on tubercle, and demonstrated his preparation containing the bacillus of that disease.——Dr. Dutrieux, the Belgian explorer, who was residing at Alexandria at the time of the bombardment, and during that trying period, when half the city was in flames, calmly pursued his work in the Egyptian Government Hospital, has been rewarded by the Khedive with the title of Bey, and the appointment of Physician-in-Chief to the Hospital. Dr. Dutrieux, in a letter dated July 20th, says: "I have escaped the massacres perpetrated by the criminals and Bedouins let loose by Arabi Pasha against a defenceless population. My house has been burnt and pillaged. As medical officer of the Government Hospital and of the European Hospital, my professional duties detained me in Alexandria, which I have not quitted for a single minute."——According to a recent report to the Sanitary Committee of Massachusetts, it appears that of 2,701 pigs examined during five months, no less than 154, or nearly 6 per cent, contained trichinæ. The animals came from different and distant regions, but the majority were from the Western States. The same report affirms that rats are affected with trichinosis at Boston to a much larger extent than in Germany. Of fifty-one rats, caught in a Boston slaughter house thirty presented trichinæ. On the other hand, twenty-eight fowls fed in the establishment were found to be healthy. Forty rats taken in another large slaughter house all contained trichinæ, but of sixty found in different stables, only six were thus affected. In France little consideration has, until lately been given to the danger of trichinæ in imported pork. At Lyons however, inspection has been commenced, and has quickly borne fruit. An enormous consignment of lard, amounting, it is said, to 120 tons, was lately received at Lyons from New York. Of fifty specimens examined immediately after arrival three were found to be infested with trichinæ. At Barcelona six cases of death from trichinosis have occurred in three months.——A MAN WHO HAS WALKED 175,200 MILES.—George Fawcett completed, in April last, his forty-seventh year of service in the English Post Office as a rural messenger. From 1835 to 1842 he rode between Sedbergh and adjacent stations, carrying mails in this way a total distance of 67,160 miles. From 1842 to 1882 he has walked daily between Sedbergh and Dent, thus traversing 175,200 miles. His entire travel as postman foots up 242,360 miles, nearly ten times the distance round the earth, and 2,360 miles further than from the earth to the moon.——The British Troops, says the Egyptian correspondent of the London *Times*, will have to encounter "the endemic hæmaturia." "It is caused by a parasite, supposed to find its way into the human body by the intermediary of small fresh-water mollusks, with which many of the canals abound." Its devastations are so serious that "last year about a dozen of the staff of the Eastern Telegraph Company at Suez were invalided within a month or two from the disease." "About three-fourths of the fellaheen population suffer from the scourge it is often fatal; it generally leaves permanent mischief, and it is always of long duration." It is a disease "which might decimate the army with permanent invalids after their return from Egypt, as only in a few cases, when the disease has been severe, is there a complete cure."——Dr. B. W. Richardson is to deliver the inaugural address of the great Welsh festival, the national Eisteddfod, which opens at Denbigh on Monday next, the 21st inst. The Eisteddfod has been held it is said since the fifth century, representing largely, and indeed, almost exclusively, the arts of music and poetry. For a few years past a new section has been introduced devoted to the discussion of subjects of scientific and social importance, and now the festival is opened by some public man, statesman, or man of science or letters on the invitation of the organizing committee. This year the choice of an orator fell on our medical *confrere*, who will have, it is expected, one of the largest audiences he has ever addressed.——PROTECTION OF THE NATURAL FORM OF WOMAN.—In Kent, England, a band of young men, it is said, have established a society for the "Protection of the Natural Form of Woman," and, according to one of the rules of the society, bind themselves, "by demonstration, argument, and entreaty, to induce their sisters, and all ladies who are injuring their bodies for the sake of fashion, to sever the remaining link which connects the present generation with barbarism." By another of the laws the members promise to live a life of protest against the fashions so prejudicial to health.——M. GRONDHOMME, who is the Superintendent of one of the largest laboratories in France, has just published a volume of notes as to the alleged poisonous properties of aniline dyes now so extensively used in the manufacture of socks, stockings, and other fabrics worn in contact with the cutaneous surface. Such dyes are especially used in the fancy fabrics sold for the wear of children from 4 to 10 years of age, and in the blues and various red shades of gentlemen's socks. M. Grondhomme declares that the cause of poisoning recorded by medical men as due to these dyes are really traceable to the arsenious acid used in the preparation of the colors, not to the coloring matter itself. The fumes of a few of the dyes arising from the manipulation of petroleum produce difficulty of respiration when persistently inhaled. This is true of naphtholin, for example. Others are perfectly neutral and inert in their effects, and possess no toxic potency whatever, and to this category belongs aniline and its immediate relatives. The facts disclosed by M. Grondhomme are worth knowing; first, because they show that such cases are to be treated as a rule as cases of arsenical poisoning, and, secondly, because they rescue a valuable coloring matter from a false imputation under which it has labored for many years.——SANITARIUM AT ELBERON.—Mr. C. G. Francklyn, in whose seashore cottage President Garfield died, has just founded and endowed a sanitarium for poor children at Elberon, in memory of his young daughter, Gladys Francklyn, who died recently in Paris.——PORRO'S OPERATION IN ITALY.—From a return published in the *Annali de Obstetricia* for August, we learn that, since its introduction in 1876, Porro's operation of removal of the uterus and ovaries, complementary to Cæsarean section, has been performed in Italy thirty-eight times Deaths occurred in twenty-four cases and recovery in fourteen, or in 36.9 per cent Of the successful cases, as many as six were operated on in the Lying-in Hospital of Milan, in the practice of Professors Chiara, Mangiagali, and Negri.——An important literary and scientific discovery is announced from Salonica. The works of the celebrated physician, Galen, which were supposed to have been lost, have been discovered by M. Papageorges. They are in manuscript, date from the fifteenth century, and appear to have originally formed 248 sheets; 144 are in good condition, 24 are mutilated or worm-eaten, and 80 are missing.——The professorship of surgery in the University of Berlin, vacant by the resignation of Baron von Langenbeck, has been offered to and accepted by Dr. von Bergmann, professor of surgery in Würzburg. The recently appointed professor will enter on his duties at the commencement of the winter season.——The sanitary instructions sent in pamphlet form to the British army in Egypt say that camps should not be made on ground that has recently been flooded, nor should the surface be dug up more than is absolutely necessary for drainage. If turbid water must be used, it should be allowed to clear itself as much as possible by subsidence, and a teaspoonful of powdered alum added to every ten gallons. The filtering of the water, where possible, is urged, and any water can be drunk if first boiled and then allowed to cool. Stringent directions are given that in cases of cholera or enteric fever all water is to be boiled before use, and distillation adopted if practicable. In the matter of food, it is advised that all meat be thoroughly cooked; that the consumption of vegetables and fruit be encouraged. As to beverages, strong alcoholic drinks are condemned, red wine is permitted, and tea, coffee, and cocoa are recommended. It is declared that tea is especially valuable where water is at all doubtful in quality, cold tea, with a little sugar and lime-juice, being an anti-scorbutic and making a refreshing drink.

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EDITORIAL.

Non-Medical Insanity Experts.—The absurdity of non-medical evidence as to insanity, especially where of a negative character has been very well shown by two recent cases. A cashier of Poughkeepsie bank, was suddenly noticed to be very extravagant, this led to investigation and a defalcation was found. On examining the cashier's house, notes, drafts and money were found scattered over it hidden in out of the way places; in some cases evidently for several years in one. The man was alternately found to be suffering from a well marked type of insanity, progressive paresis, and sent to an insane asylum. In this case sharp keen business men had had a man under observation for several years, yet he committed criminal acts due to the onset of an easily diagnosticated form of insanity. In the second case a teller of a Troy bank was insane for several years before the trustees knew it. Meanwhile the cashier had been able by reason of the teller's infirmity to rob the bank and bring it to the verge of suspension. Here are two cases where business men might be expected to detect the first sign of insanity, since their interests were deeply concerned but in both cases their pecuniary interests suffered because they failed to detect the preliminary symptoms of an exceedingly easily diagnosticated form of insanity. If keen business men fail to find evidences in insanity, in cases where their interests are deeply concerned, how little value can be attached to their negative evidence in cases where life or death or personal property are concerned. The story about Esquirol and the young physician has a special application here, Medical Journals, therefore, which are citing the evidence of laymen as to the non-existence of insanity, are doing the profession as much dishonor as if they cited lay testimony as evidence of the value of some copyrighted nostrum.

French Malpractice Suits.—These seem to be settled very judiciously in France. In the United States penalties are rarely exacted from people who have ignorantly, maliciously, or fraudulently subjected a physician to the odium and expense of a malpractice suit. They manage these things better in France, however, as is shown by a case of recent occurrence. A wood merchant (*Journal de Médecine de Bourdeaux*) sustained a compound fracture of the leg. He was at first treated by a physician of the same city. Upon the latter demanding his fee a legal demand was made of $2000 damages caused by his ignorance of medicine, as evidenced in the use of iron perchloride as a hæmostatic. The case was committed to a jury of experts, who decided in favor of the physician, whereupon the plaintiff offered the physician his fees and also to pay the expenses of the law suit. This offer was refused, and a counter suit brought for the fees, the expenses of the first suit, and damages for injury to professional reputation. The tribunal condemned the patient to pay all expenses of both suits, the physician's fees, and exacted a pecuniary penalty for damages to the physician's reputation. A few counter suits of this kind could not fail to exert a beneficial effect on the mania for malpractice suits which at times breaks out in certain communities of the United States. The great trouble, however, is that the majority of those instituting malpractice suits are so often men of straw that the expenses of a counter suit are hardly justified.

Spoons in the Intestine.—Mr. Samuel Kohn, in the *Medical Record*, New York, July 22d, relates a remarkeble case in which a patient suffering from melancholia, with intercurrent attacks of mania, was removed from the asylum with symptoms of peritonitis; vomiting; pulse, 120; temperature, 102.5° F.; a pale, anxious countenance, &c., with general abdominal pain, but special tenderness over the right iliac region. Such attacks recurred and subsided alternately over a period of five weeks, partial obstruction occurring four times. The patient said she was "rotten inside," and could not possibly live. One day the mother of the patient came to the doctor's office and said that, that morning, in the fæces of the patient, which she had regularly examined she had found a long, hard, spindle-shaped mass of fæces, encased in glairy mucus. Examination revealed the edges of several spoons protruding from the mass. Softening and breaking it up she found it to contain three teaspoons, which the doctor found to have every appearance of having lain lengthways in the intestine for a long time, the concavity of one fitting into the convexity of another. All abdominal symptoms disappeared. The patient declared that she swallowed them all in one day with the intention of thus ending her existence.

FLAMELESS COMBUSTION.—At the *soirée* of the Society of Chemical Industry at Owens College, on Thursday, the 6th inst. a new theory of combustion was practically illustrated by Mr. Thomas Fletcher, of Warrington, the results being so totally unexpected that many present would, and in fact did, go away with the impression that some deception was being practiced. Mr. Jacob Reese, the inventor of the Reese fusing disk, has stated his belief that, if it were possible to produce combustion without flame, the temperatures and duty obtained from any fuel would be enormously increased. It has remained for Mr. Fletcher to not only prove the possibility of flameless combustion in more than one form, but also to demonstrate practically the enormously high temperatures which can be obtained by this means. Taking a ball of iron wire, about three pounds in weight, Mr. Fletcher placed it on a slab of fire-clay, and directing a blowpipe flame on it for a few seconds he suddenly blew the flame out. The temperature increased so rapidly that in a few seconds the wrought iron fused and ran into drops, and this temperature was steadily maintained. The room was darkened, but the closest examination did not show a trace of flame, although the fact that the gas was burning was proved by repeatedly relighting and extinguishing it. The same experiment was repeated in another form by directing the flameless heat into a small fire-clay chamber, in which a refractory clay crueiblc, made specially for nickel melting, was partially fused and worked into a ball like soft putty, the sides of the fire-clay chamber being at the same fused. The heat is so tremendous that the blowpipe laboratory which was given up to Mr. Fletcher for the evening was much too hot to be agreeable, in spite of open windows and ventilators. How far this discovery can be utilized remains to be seen, but it would appear that the presence of flame usually considered to be a sign of combustion, is really an indication of imperfect results, and the best duty is to be obtained only when flame is totally absent. It is certain that such temperatures as obtained by Mr. Fletcher without flame have never previously been obtained with a fuel used, which was nothing more than a small gas supply for a quarter-inch pipe, asisted by an air-blast.

GUITEAU'S BRAIN—MICROSCOPISTS' REPORT.—The report of Drs. J. W. S. Arnold, E. O. Shakspeare, and J. C. McConnell has been published. It was sent to the *Medical News*. The competency of the examiners is admitted. The report, however, is so valueless that it is not allowed space for publication.

When it is universally admitted that brain lesions, even so extensive as to be macroscopic in character and extent, are not inconsistent with even exalted intellectuality, and with a perfect condition of sanity; and when it is also admitted that insanity of the most violent and chronic character may exist without lesions, even microscopic in nature and degree; and when it is still further admitted that there is no logical connection between brain lesion and irregularity of brain function, or between irregularity of brain function and the absence or presence of brain lesion, the average, or even the best, thinkers in the profession may well and sensibly say of the whole of the gross and minute examination of Guiteau's brain, what does it all amount to, and what is it all worth? *Cui Bono?*

Of course every one knows that in absolute, or, in incipient dementia paralytica, there are certain brain changes observable, as they were to a certain extent in Guiteau's brain, but these changes may exist for a long period without any disturbance of the mental balance, and their incipient or decided presence does not prove any absence or want of sound judgment. There is dementia without these changes, and there are these changes without dementia. What does their presence or absence prove as to the question of sanity?

In addition to these well known facts, it cannot be said whether the changes in Guiteau's brain, as represented in this report, were recent or not; whether they appeared before or after the murder! Post mortem changes are often mistaken for lesions; and errors of manipulation often lead examiners astray. Even assuming that in this case there were no such errors, what does the report all amount to? *Verba et prœterea nihil!* words and nothing more. The object of the examination was not only unattained, but unattainable! *Cui Bono?*

PRELIMINARY EXAMINATIONS FOR THE UNIVERSITY OF PENNSYLVANIA.—"In order to facilitate the admission of students, and to *aid the upward tendency of medical education,* the authorities of the University of Pennsylvania have appointed physicians, graduates of that school, in the different prominent cities of the Union, remote from Philadelphia, whose duty it shall be to examine candidates for admission into the medical department. The result of the examination is forwarded to the authorities of the University, who, in turn notify the candidate of his success or failure. By this means the applicant is spared the expenditure of time and money necessary to a trip to this city on an uncertainty."

Such is the notice published on this subject.

It must be evident to all that however satisfactory this arrangement may be to the University, it will be generally and justly condemned by the profession.

In the first place, it is a shirking, if not an evasion, of all responsibility in such examinations.

A careless, or over kind, or unfaithful examiner, or one seeking popularity, or afraid of responsibility, or a demagogue, might and would "pass" students wholly unworthy of such a favor.

It relieves the University of onerous and unwelcome work, and saddles this upon those who have nothing whatever to do with it.

It is asking physicians to do for nothing work for which the faculty are paid.

It is a device, by a very cheap compliment bestowed upon the examiners, to make them partisans and canvassers for a medical school.

As to the benevolent object of saving an applicant a possibly useless journey and some money, such philanthropy (?) is entirely open to question and criticism. And as to the "aiding the upward tendency of medical education," such a plea is at best a subterfuge.

NATIONAL BOARD OF HEALTH—It is alleged by the *Chicago Medical Review,* that the reason why Congress crippled this distinguished organization by reducing its yearly income is as follows:—"This action of Congress is not the result of pure apathy, such as leads that body to neglect all business not advocated by interested representatives, nor is it the result of parsimony, it is due to the covert opposition of the health officer of the port of New York and the steamship companies. The former official, a medical politician of the homœopathic stripe, able to pay $20,000 into the party fund from his official perquisites, has been forced to give more attention than usual to his duties by reason of the action of western sanitarians against variolous emigrants, and has felt greatly aggrieved in consequence. The steamship companies have been forced to increase their expenses by the quasi-inspection of emigrants, and have made common cause with the health officer. It is simply shameful that Congress should yield to such influences. The pecuniary losses, not to speak of the loss of life, from small-pox during the last year have been simply incalculable. The disease is however to be left to devastate the Northwest during the coming winter, since Congress cannot afford to offend the health officer of the port of New York and certain European steamship companies."

THE SCIENCE OF MEDICINE AND THE ART OF HEALING.—"There is no exclusive *a priori* method which leads to the successful treatment of disease. You begin in the primrose paths of knowledge which are only preliminary to your real work. Anatomy is no more medicine than a child's dissected alphabet is literature. Physiology and chemistry throw gleams of light here and there on curative methods, but are apt to lead their votaries far away from practice. Pathological anatomy teaches a great deal, but it is, after all, like inspecting what is left of the fireworks on the morning of the fifth of July. It is very pleasant to dissect a muscle, to make a precipitate, to watch a contracting heart, to study a translucent slice of a healthy or diseased organ. These pursuits, sisters of her who presides over health and disease, are the sirens that won over Agassiz and Huxley and Helmholtz to their flowery realms. But just as zoölogy, chemistry, physiology, histology, are not the science of medicine, so neither is the science of medicine the same thing as the art of healing. To go hastily from the library of old books and the laboratory of new experiments to the bedside of disease is imitating the presumption of those rash profligates who, as Thomas Boston says, think they can take a "leap out of Delilah's lap into Abraham's bosom."—O.W. HOLMES.

Mark Twain says there is something very fascinating about science. It gives you such wholesale returns of conjecture for such a trifling investment of facts. Is it possible that he can have been reading some of the recent writings on sewer gas?

NO COMPLAINT.—A man in passing a country churchyard saw the sexton digging a grave, and inquired: "Who's dead!" Sexton—"Old Squire Bumble" Man—"What complaint?" Sexton (without looking up)—"No complaint; everybody's satisfied."

"What would you do, sir," asks *Punch*," "if you were called to see a man who had hung himself?" "I would cut him down.'' "Then what would you do?" "I would cut him up."

COLUMBUS MEDICAL COLLEGE IMBROGLIO.— A pamphlet with this title has been received from Dr. J. F. Baldwin, formerly connected with the above mentioned ill-starred and badly smirched Institution. It shows how Dr. Baldwin was ejected from the Faculty.

The whole trouble seems to have been due to the fact that Dr. (?) A. M. Dent, of Weston, Louis County, West Virginia, after failing most abjectly to pass an examination before the West Virginia State Board of Examiners, was allowed, after attendance of four weeks at the college named, to graduate and to obtain his diploma; and to the further fact, that Dr. Baldwin stated all of this in a note to Dr. James E. Reeves, President of the West Virginia Board of Health and one of the examiners of the said Dent.

For this Dr. Baldwin was ejected summarily, unjustly, illegally, (there being no quorum) and disreputably.

Dr. Baldwin charges that this was done

through the influence of Dr. J. W. Hamilton, one of the Faculty, who owns the college building; controls its stock; chooses the trustees, etc., etc.

A careful reading of this pamphlet shows that Dr. Baldwin has been foully treated; that his course was right and not wrong; that the Columbus Medical College is a disreputable Institution and not worthy of recognition; that it has been repudiated by the State Board of West Virginia; that Dr. James E. Reeves has acted handsomely, justly, fairly and independently; and that Dr. Hamilton, of the college named, and Dr. D. N. Kinsman, Dean (who declared that Dent had passed with "a high grade, particularly in obstetrics,") have acted very badly indeed. Dr. Reeves, who examined Dent, says of him:

"He was given the same written questions that had been presented to every applicant that had preceded him in the First Congressional District, and to our utter astonishment failed even to tell how many bones there are in the spinal column; what muscles form the calf of the leg; to name the internal cavities of the heart, and describe the circulation of the blood!

"When it came to his oral examination, he was equally unprepared. Although he professed to have attended more than a hundred cases of obstetrics in his practice, he could not tell in how many stages is labor divided; what are the superior and inferior openings sometimes called; the difference between position and presentation; by what indices or distinguishing marks the particular position of the head relative to the pelvis is determined; the mechanism of the *first position*; nor the difference between accidental and unavoidable hæmorrhage. In other departments he was equally deficient. He did not know the divisions of hernia; or the difference between *idiopathic* and *symptomatic* fever."

And yet 30 days after this failure, he graduated at Columbus Medical College, and the Dean says of him, his "grade was high, particularly in obstetrics"!!! Those 30 days represented Dent's second course.

Such a college has been justly and properly repudiated by the State Board of West Va., and must, of course, be a stench in the nostrils of all corporate bodies and and decent practitioners in the entire country. More than this, it is at the mercy of the prosecuting attorney of the state of Ohio.

Section 440.3b of the Revised Statutes of Ohio (Vol. 78, Ohio Laws, page 28) reads as follows:

"Whoever shall make, issue or publish, or cause to be made. issued or published, for the purpose of sale, barter or gift. any diploma, certificate or writing, representing the holder thereof to be a graduate of any medical school or college, or any educational institute of medicine whatsoever, *unless such holder shall have in fact attended a complete course of instruction at such school, college, or institution for medical teaching, which course shall be equal to the average course of instruction at other schools colleges or institutions where the various branches of medicine are taught, as a science, in good standing, in the State of Ohio* upon conviction thereof shall be fined in any sum not exceeding one thousand dollars nor less than one hundred dollars, or imprisoned in the penitentiary not more than three years nor less than one year, or both, at the discretion of the Court."

REDUCTION OF A DISLOCATED NECK.—The San Francisco *Sunday Chronicle* contains a curious account of a servant, Lizzie Hammond, having fallen from the fifth story of the Brooklyn Hotel, in that city, and dislocated the second cervical vertebra, and of having had the dislocation reduced by the joint labors of Drs. R. A. McLain, F. F. Lord and H. N. Rucker. As to the correctness of such a diagnosis, it is not necessary to say anything. Fracture of this vertebra without dislocation and with recovery is not without precedent; the same may be said of partial displacement; but as to "complete dislocation," the narrative must be taken *cum grano salis*.

OVER-HEATED GENITALS.—Dr. John I. Ligget, in the *Medical Gazette*, develops the idea that the present form of dress of men overheats the genitals and so induces a hyper-activity of the same, resulting in a want of control over the sexual impulses. The solution of the problem of sexual excesses he places in "ventilation" of the genitals. "Light clothes are to be worn, and if the imprudent man wears drawers, these are to be perforated about the testes to secure ventilation."

If necessary, an India-rubber tube should be passed up through the pantaloons, and coiled around the testes; with one end projecting from the neck, and the other appearing at the boot-heel. The cool current of air thus established will be very effective. In extreme cases this tube should be passed through a larger tube containing pulverized ice, and a wind fan, operated by walking, is to be attached; projecting thus, upwards, a constant and uniformly cold current of air across the offending organs.

When the sufferer is seated in a chair the fan is to be operated by a constant motion of the legs, thus preventing any interruption of its action; and on going to bed, the fan is to be attached to a clock on the mantelpiece, or on some shelf constructed for the purpose, so that the patient may be under constant and active treatment.

The bromides may also be used, with low diet, and venesection.

PALMAM QUI MERUIT FERAT.—Rome is about to add to her long list of houses bearing tablets that commemorate the residence within their walls of distinguished foreigners, the house at No. 17 Vie dei Pretetti, in which lived during his stay at Rome Prof. S. F. B. Morse. Upon the tablet will be placed the following inscription: "S. P. Q. R. In this house lived Samuel Finley Breese Morse from the 20th of February, 1830, to 5th January, 1831. He was the inventor of the electric magnetic telegraph. Born in Charlestown on the 22d of April, 1791. Died in New York on the 2d of April, 1872."

It is a very unwelcome and thankless office to detract from honors paid to either the dead or the living; and more particularly is this true when these honors are paid to the American dead, and an American medical journal is called upon, in defence of other dead, to speak the truth. The Romans, in their rigid philosophy, declared justly however, "*justitia fiat quia cœlum ruit;*" justice must be done even though the Heavens fall.

Perhaps there is no greater or more widely spread fallacy than that Samuel Finley Breese Morse was the inventor of the electric magnetic telegraph.

When Mr. Jefferson Davis was Secretary of War he was told casually by Dr. Joseph Henry, of the Smithsonian Institute, that he (Dr. Henry) had invented what he believed would be a great blessing to mankind, but that he had neither leisure nor inclination to bring the matter before the public. He at the same time showed and explained to Mr. Davis the magnetic telegraph complete and in operation.

The instrument was also showed to Mr. S. F. B. Morse, and he was accorded the privilege of doing with it what he pleased. The results are before the public.

These facts were given to the writer by Mr. Davis personally, and they all are on record in the Smithsonian Transactions over Dr. Henry's signature.

Dr. Joseph Henry, like Agassiz, had not time for making money; his time was too valuable. He gave the results of his brain-work to Mr. Morse, and as a result the telegraph is before the nations—binding them together in an electric bond, and making them one.

The world crowns Morse; but justice crowns Henry.

They are both dead; they both sleep in honor and distinction; and now that neither can blush to hear the truth, it is time that it should be told.

Dr. Joseph Henry deserves this vindication; he deserves all of the honor and the glory given to Morse as "the inventor of the magnetic telegraph," and it is a pleasure, as well as a duty, to a medical journal to give to Dr. Joseph Henry the public credit and the honor to which he is so fully entitled. *Palmam qui meruit ferat.*

THE NATIONAL MUSEUM OF HYGIENE, has been fortunate in receiving $7,500 from the last Congress. The institution named is under the care of the Bureau of Medicine and Surgery of the Naval Department, and is at Washington, D. C. It is the permanent central Depository of the American Public Health Association and its success is assured.

The necessity of a central institution of this sort has long been felt, and it is hoped that the present organization will supply this need. The plan briefly described comprehends a collection that shall be illustrative of the entire range of sanitary science, the establishment of a course of lectures by authoritative sanitarians from all sections of the country, and a library of sanitary science accessible, under proper restrictions and guarantees, to all who are engaged in the study of this branch of knowledge. This library already numbers many of the standard sanitary works in the English, French and German languages, and is constantly increasing.

It is intended that it shall exhibit the present state and future progress of the Nation in all departments of hygiene, and to carry out this important scheme, the co-operation of physicians, engineers, architects, builders, manufacturers, inventors, and others interested in sanitary matters, is not only desirable but indispensable.

Contributions of articles, appliances, models, drawings, etc., illustrating improvements in food, water supply, bedding, clothing, marine architecture, house and hospital construction and furniture; apparatus for heating, illuminating, ventilation, and removal of excreta and refuse; culinary. laundry and bath facilities; appliances for physical culture and exercise; and whatever else tends to the preservation of health and the prevention of disease, are therefore solicited.

Contributions of materials and books should be sent to the address of the Surgeon General of the Navy, Philip S. Wales, M. D. Donors and depositors will, in every case, be duly credited on the descriptive labels of their exhibits.

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ORIGINAL ARTICLES.

"Qui Docet Discit."

GYPSUM (*known also under the obsolete name* "*Plaster of Paris.*") Its General Application in Surgery, with Special Reference to its Use in the Treatment of Clubfoot, and the Role it will Play in Future Wars, Combined with a Septic Dressing. By M. SCHUPPERT, M. D., New Orleans, La.

It was in 1842, whilst traveling over the snow-covered mountains of the Bernese Alps, in Switzerland, that I met one of those idylic shepherds who live a part of the year in these desolate mountain valleys amongst their cattle and goats. The man was engaged in dressing a fractured goat's leg with gypsum, which he said was a custom inherited from times immemorial, and was frequently made use of with an addition of alumn to render the bandage more durable. Who, at that time, would have set the horoscope to let me have a glance in it that I, in a decennium later, would have to dress human instead of goats' legs! Still, when that had arrived, there were different other methods in use, as the old starch bandage, the Philadelphia fracture box, stiff india rubber splints (a dangerous invention), Liston's splint, etc. The first impulse of using gypsum I received was by the appearance of a pamphlet of the late illustrious Russian surgeon Szymanowski. It was not till then that I recollected the gypsum dressings I had first seen in Switzerland. But the method suffered, besides being new, the want of a proper material, or say rather, want of skill and experience; it failed besides in the proper stimulus for improving the method, since the old machines and dressings were still found appropriate and being used.

It was towards the end of the sixty years that I had come in possession of a method of handling the gypsum dressings which was perfectly satisfactory. Rollers of from 2½″ to 3″ broad and 4 yards in length, cut off a kind of mull, over common mosquito bar material, which were covered with gypsum finely powdered. Such gypsed rollers laid in water during a few minutes till they are thoroughly saturated are ready for use, but have to be applied quickly. These gypsum bandages, properly laid on in a proper manner, have with me displaced all other contrivances for a similar purpose. With them a new era had dawned, and daily new fields opened where a solid, substantial, impermeable dressing was wanted and supplied. It is more than a decade now that I have thus made use of gypsum dressings in its present form and improvements, and well may I apply the "*novum prematur in annis*" in recommending them.

With these few preliminary historical remarks I will now pass in review some of the main applications of the gypsum dressings in surgical practice.

In serious injuries of the extremities and most so of railroad accidents associated with crushing of the bones and extensive lacerations of the soft integuments, amputation, a speedy ablation of the injured limbs, has always been considered legitimate surgical practice. As much regretted and a "*testimonium paupertatis*" the operation of amputation is still generally considered; nevertheless the majority of surgeons claim such action as an unavoidable and proper proceeding in surgery. With a change of that consideration, when the indications for amputation have become more limited or even abandoned, then one more of the opprobria in surgery will have departed. The prospects of accomplishing that desideratum are to my mind intimately connected if not based upon the introduction, attention and proper application of that material to which I intend to give here special attention, the *Gypsum*, or as commonly, though inappropriately called, "*Plaster of Paris*."

On undertaking with the assistance of that material the preservation of a shattered limb, as above mentioned, without at the same time risking the life of the patient, two essential conditions are required.

1. That the parts of the injured limb farthest off from the centre of innervation and circulation should not be deprived of its life fluids.

2. That the access of atmospheric air be hermetically excluded from the wound.

The reintroduction of gypsum into surgery, the value and importance of which has scarcely been recognized to the extent it deserves, is, if not the greatest boon, certainly one of the most important and happy innovations of this century. I say this without fear of contradiction and far from a spirit of exaggeration, and hope to prove the solidity of my assertion.

As one of the most triumphant results of conservative surgery obtained from the proper application of gypsum, I will select a case with a limb so crushed that nothing short of an immediate amputation could ever have been thought of by any surgeon who had not had a previous experience of what could be accomplished with gypsum dressings if properly applied.

A drayman of about 55 years of age and near 200 pounds of weight, while intoxicated, fell from his dray, loaded at the time with ice. The weight of his vehicle inclusive of the load was judged at the time to have been not less than 4,000 pounds. Two of the wheels of the dray passed over the man's right leg, crushing the two long bones in the middle of the calf, lacerating the integuments in a most frightful manner. After my arrival at the man's domicil, he was forthwith narcotized with chloroform. An examination proved the deep-seated arteries still intact. The posterior tibial artery could be felt beating distinctly behind the inner malleolus. Since then no fear for the loss of the foot needed be entertained, I decided upon the preservation of the extremity, disregarding the sanctioned call for an amputation. After a thorough cleansing of the limb, I removed all foreign substances out of the extensive wound, as also such bone splinters detached from all integuments, including the periosteum. The wound measuring 13 ctm. (5″) in length and 8 ctm. (3″) broad was irrigated for half an hour, while the finger searched every corner of the wound. After several small arteries had been ligated by my son William and bleeding had totally ceased the wound was closed with some sutures, or rather its edges neared each other as much as possible, and a septic occlusive dressing was applied. The whole extremity was then encased with gypsed rollers, including the pelvis, over which a coating of gypsum paste was spread, and the whole polished. Such a dressing, to render it still more impermeable towards the atmospheric air, has to be painted when dry with copal varnish or receive a coating of melted paraffin, to which some phenol is added. Both ends of such a gypsum dressing ought besides to be secured by a layer of aseptic cotton or salycilic wadding placed between the skin and the bandages. The coating with varnish or paraffin will render the still porous gypsum absolutely impermeable against the atmospheric air.

There is no need of removing such a dressing before the end of the third week. When, at that time, the bandage was removed, the large wound had almost all healed by granulations and begun to cicatrize.

During that time the patient, who had been a hard drinker, suffered an attack of *delirium tremens*, lasting 3 days. It afforded the strength and constant attention of 8 powerful men to hold and guard the patient during that fearful attack. What would have been the result without that solid gypsum bandage? No doubt, without any other kind of dressing, not only the success of the treatment would have been spoiled, but the man's limb, if not his life, would have become endangered, even if amputation at that period had been resolved on. That patient recovered with a still useful limb, though two inches shorter than its partner. I am almost positive that no surgeon would have dared to undertake the preservation of that limb, so extensively lacerated, with the bones crushed into so many pieces; if it be then that he had not experienced similar favorable results of a properly applied occlusive aseptic dressing.

In 1875 I visited a number of hospitals of different German universities. In all of them asepsis had been introduced, but it was in Halle, Prussia, in the hospital under the direction of the practical Volkmann, the distinguished professor of surgery, that I for the first time met with an aseptic dressing applied with that scrupulous attention and pedantic accuracy which constitutes a real aseptic and occlusive bandage, though, by the want of gypsum, not hermetically occlusive. Indeed so great was the contrast of the obtained results, compared with others and those Volkmann had attained in former years, that at a meeting of German surgeons at Berlin in the following year, when he astonished the profession with his statistical reports, he had thought it advisable to bring with him three of his assistants to testify to the so far unheard of results of asepsis obtained in Halle. It was in Halle also where Lister himself saw for the first time how aseptic dressings ought to be made, and he was liberal enough to declare that in Volkmann he had met his master. An aseptic dressing indeed, to be peerless, affords a kind of pedantry. The least mistake or oversight will certainly spoil the whole treatment and render it abortive. The same accuracy and attention given to the wounded has in an equal measure to be observed with the surroundings. The surgeon and his assistants, the instruments and utensils used, and last, though not least, the operating room have all to present an aseptic condition. The operating room (Volkmann's) ought to be taken for a pattern. Nowhere have I met with its equal. But it would be beyond the scope of this article to say more of this at the present instance.

The opponents and those who believe they could dispense with asepsis are indeed greatly mistaken. They may point to a dozen operations with a lucky issue, but place them at one of those great hospitals, with a yearly large number of erysipelas, hospital gangrene, diphtheritic, puerperal, pyæmic, and septicæmic fevers, and let them perform a number of various or capital operations, and how soon will they become aware of their error?

But what even the best aseptic treatment would fail to accomplish without the additional gypsum dressings we will see when we come to its application in war, on the battlefield, in the transport of the wounded. What would the aseptic bandaging have consummated in the case described above without the additional support of the gypsum cover? In the face of those conspicuous prospective results of conservative surgery, I venture to pronounce the re-introduction of the gypsum into surgical practice as one of the happiest and most important acquisitions of this century. With its efficiency in the wounded, the theme is not by far exhausted, there is still a great deal more to be said in its favor. I will but mention here its application in the treatment of coxalgia, of distortions, deformities of the spine, of hands and feet in congenital and acquired clubfoot; in osteomyelitis, with its consecutive tissues, after resection of bones in their continuity and contiguity; in fractures, simple and compound; in dislocations and in sprains, etc. What would the result of treatment of these diseases amount to without the additional application of gypsum? Of the use of the fixed gypsum bandage in coxalgia after distention and subsequent immobilisation I have spoken on another occasion; also of the treatment of oblique fracture of the thigh. There is surely no cheaper, and certainly no superior treatment than that with gypsum. I need scarcely refer to the admirable and matchless role the gypsum plays in the treatment of inflammation and curvature of the spine, which not long ago caused so much fuss about an impugned originality, but nevertheless made more noise than Waterloo ever did. Of great utility and efficiency is the gypsum dressing in the treatment of *sprains*. It supersedes here every other kind of treatment, provided the main requisite, a perfect immobilisation of all the muscles comprising the respective joint is not lost sight of. The more recent the injury the sooner will a cure be established, though I have also seen old chronic cases to it yield more readily than under any other treatment.

But one of the most important applications of the gypsum bandage is in the treatment of *clubfoot*. I am well aware that I cannot do full justice to so important a chapter in so brief a space; I will, therefore, select only what seems to me of special interest and belongs to the more practical and mechanical part. Still I cannot let go the opportunity to say a few words about the much disputed origin of that singular deformity, the *congenital* clubfoot. It is known that some distinguished writers of recent date have tried to explain the cause of that deformity in a uterine pressure induced by a want of sufficient *liquor amnii*; and to help this obscure and singular hypothesis a certain callosity or induration on the feet of the newborn has been pointed at. If that callosity of the skin of the newborn had a real existence—which I doubt very much, in having never met with it among some sixty cases of clubfeet (I once delivered a woman when the fœtus was born with club hands and feet, and I do not recollect that I ever met with a greater quantity of liquor amnii as in that case)—and if it should be asserted that the increase of liquid was formed after the deformity had taken place, how is that second hypothesis to be proven? But, admitting, for argument's sake, the existence of a callosity on the skin of the newborn's feet, such could never be produced by a direct pressure, which would cause rather atrophy, or a decrease of tissue instead of an increase. A close and rigid examination into the history of over sixty cases of congenital clubfoot did not fail to establish the fact in almost every instance that during gestation the mother had met with some accidental nervous impression, a sudden shock to the nervous centre, the brain—as, for example, coming suddenly across a cripple of one or another kind. It was further established that up to the sixth month of fœtal life the fœtus remained liable to become afflicted with these deformities. Be this now as it may, there is at least no sufficient reason to refute that interpretation as unreasonable or impossible.

Regarding the *treatment* of clubfoot there exists probably in the whole domain of surgery hardly a subject which has caused as much noise and sensation as the treatment of this deformity. The material invented and recommended for its cure is, so to say, overwhelming. To enumerate the countless machines, apparatuses, the wagon-loads full of divine contrivances of human ingenuity, one often more complicated, curious or absurd than the others, would be a thankless undertaking. What a sensation did it not produce when the happy (?) results of the subcutaneous section of tendons became known, a method which promised immortality to the name of Stromeyer, which would in ancient times have caused "slaughtered hecatombs around it to bleed." Who of the old surgeons does not recollect the ridiculous attempts of Guerin to pilfer and purloin that method of Stromeyer after it had already for seven years agitated the medical press; and the end of that controversy, that Stromeyer remained in possession of all the glory of his invention? And what do we think to-day of the usefulness, the benefit to be derived from that same tenotomy which, but a few years since caused such an agitation in the medical world? To say the least, we consider it of a very doubtful value. I need not, with Hunter, point at the many tenotomycal clubfeet walking still as such in the streets of Berlin. A great many surgeons of the present day believe still that in cases of congenital pes equino-varus, in cases with a deficiency of a heel, a shortening of the tendo-Achillis, tenotomy to be the only remedy in winning new material between the cut surfaces of the tendon which, by gradual extension, would be of great benefit, if not the only means, to gain a properly shaped foot. But that idea is an illusion, the benefit imaginary, and the whole surgical act with regard to its final issue rather detrimental than beneficial. The stretching of the foot immediately after tenotomy of the tendo-Achillis, as some surgeons advocate, rests upon a great error. The tendon, in consequence of its discission, will obtain a higher insertion, but never grow together again, and will leave the subject a cripple for lifetime. Even if the stretching should be done gradually, or the tendon be only cut to two-thirds, as some have advised, nothing will be won therewith in regard to an elongation of the tendon. I, for my part, have no further use of tenotomy in any shape, though, on the other hand, I would not fear the spectre of a phlegmon, erysipelas to follow, or even a cutting of the posterior tibial artery, consequences said to happen after tenotomy, but which would deter no skillful surgeon from performing the operation.

Looking into the history of treating club-foot from the time of Thilenius, Michaelis and Delpech to Stromeyer and our latest days, what a singular record do we not observe. A treatment, the most complicated, we see reduced to its utmost simplicity; with a few handsful of gypsum we are subduing an ailment, apparently so persistent, as to become known amongst the most intractable diseases for centuries. Still it would be committing an injustice to treat with silence two surgeons who were centuries in advance in the treatment of that deformity. The names of those two surgical heroes were Wuerz of Bale and Fabricius of Bern, both from Switzerland. Fabricius d' aquapendente later a Professor of Anatomy in Italy, was the celebrated tutor of Harvey. Both were fighting against the many prejudices of their countrymen and battling views deeply rooted in popular belief and ignorance. Wuerz well acquainted with the manner the shepherds in the alpine regions were in the habit of treating fractured limbs of their goats by enclosing the limbs with gypsed bandages, made use of the same material in dressing the deformed feet of his patients with such fixed and stiffened gypsum bandages, and in that manner succeeded in gradually restoring the feet to the proper shape, at the same time he denounced baths, cataplasms and salves, at that time in general use. Fabricius, on the other side, broke lances in defence of an early treatment of these congenital deformities. The earlier the treatment began, he maintained, the sooner would a cure be accomplished. He also made use of the gypsum bandages to retain the feet for some time in the position given them, the balance he left to nature.

It required centuries to reverse all the long forgotten rational advices these two excellent Surgeons had thought and practically demonstrated, and it is not without causing some astonishment when we see Italian and French surgeons appearing centuries later (Wuerz and Fabricius belonged to the 16th and 17th century) on the theatre of surgical practice claiming with an unfrozen mien for themselves these same orthopædic maxims which Wuerz and Fabricius had for so long practiced. But what is not less surprising is to observe in our days practical surgeons to invent new and complicated machines for the treatment and cure of these deformities, replenishing therewith the lumber rooms overfilled already with the plunder of impracticable contrivances. And not less dumbfounding must it be to observe professional men quarreling about the time congenital distortions should be taken in hand, giving it as their opinion that the first year of childhood should have passed before a treatment ought to begin. For such dullards, of course, a Wuerz and Fabricius have lived and thought in vain.

With regard to the treatment of clubfoot, of the congenital as well as of the acquired kind reduced to its utmost simplicity, which I have advocated and exercised beyond a decade, I will state here, that of all authors who have written on the subject, Hueter, of Griefwald, the late distinguished Professor of Surgery, is the only one of all surgeons who came nearest to that elementary treatment. Hueter was using a piece of a cotton bandage as a kind of "stirrup," by which the foot is held by an assistant, and bent towards a straight and natural position and which piece of bandage is then included in the gypsum dressing, when the surgeon surrounds the foot with the gypsum bandages. I dispense with both the "stirrup" and the assistant.

The method to which I have reduced the treatment consists in the following: After foot and leg have been surrounded with a flannel bandage up to the half of the thigh, three or four gypsum rollers, each from three to four metres long and six centimetres broad, cut out of a piece of mull or a common mosquito bar overspread with gypsum from two to three mm. thick, are submerged in a basin filled with water. After a while, when no air vesicles appear any more on top of the water, in about one or two minutes the bandaging is to begin. Beginning at the foot, the flannel covering is surrounded from three to four layers thick. The whole is then covered with a gypsum paste about two or three mm. thick, and again surrounded with one layer of a mull roller, previously made neat, after which the surgeon takes hold of the foot and leg, bending and placing the foot in the position previously tried before narcotizing the patient, as not causing pain. In that position the gypsum dressing has to become hard, which is accomplished in a few minutes. As a matter of course, it affords some experience to handle the material as well as the extremity in a proper and quick manner. An experienced manipulator will adjust the foot in its proper position with only a few fingers, avoiding too much pressure on the foot. It is advisable in the first dressing to be moderate in every respect, and not try to obtain too much at once. The younger the children the better, the the easier will the feet be stretched and brought into a normal shape. I have thus treated children from one to two weeks old and not used more than two dressings. In older persons, with congenital clubfeet, I have used as many as four and five dressings, and succeeded in restoring the feet with even dislocations of tarsal bones, which under the third or fourth bandaging were easily reduced to their normal position. A forced manual correction of old distorted clubfeet Hueter believes belonged to v. Langenbelk. I have reduced such bones by a forced manual correction over twenty years back, and without ever seeing a word printed about it. I therefore vindicate that method to common sense, and that has already existed to v. Langenbeck. Children I have almost invariably narcotized with chloroform before applying the dressings. If they are asleep at the time and the chloroform is administered carefully, they may have the feet bandaged without waking. I have observed that on more than one occasion. That only one foot can be bandaged at the time is obvious, since the gypsum rollers would be spoiled by getting too hard.

The after treatment, after dispensing with the gypsum bandages, consists in retaining the corrected form of the feet, which is best accomplished by light and small steel splints fastened to the shoes in front of the heels, passing around and on both sides of the legs, and held in position by bands or straps. These steel splints are also provided with joints, corresponding to the foot and knee joints. Such shoes have to be worn till the muscles of the extremities have obtained sufficient development and strength to dispense with their support, and which may be accelerated by daily gymnastic exercises and the massage.

I have still to mention certain kind of deformities with a natural deficiency of the bones, where, for instance, the calcaneum is merely a rudimentary bone, the heel therefore wanting. Such deformities are not caused by a myogenous contraction, but are deviations from the normal development of the bone, and neither tenotomy nor any other mechanical contrivance can be of any service.

To another class of deformities where nothing will be won by a discission of muscles or their aponeuroses, yet where tenotomy evidently will cause harm instead of good, belongs the *acquired clubfoot*, a permanent contraction of certain muscle groups and a consecutive paralysis of their antagonists. By the unreserved and unqualified discission of these muscles and tendons great mischief has been produced. In a paralysis, for instance, of the *extensores* pedis, the gastrocnemii and the soleus we will observe the flexor muscle, the muscle peroneus longus to obtain such a preponderance as to cause a considerable contortion of the foot in two directions, from forward backward and from outward inward, and in such a condition the aponeurosis of the pes valgus and the short muscles of that foot will become *permanently* shorter. There it is where tenotomy will cause the greatest mischief.

I might herewith close this interesting and important chapter of the use of gypsum had I not in the last remarks made use of the denomination of *extensor* and *flexor muscles*, which carry commonly a different significiation. I will therefore offer a proposition which originated with the distinguished anatomist, Prof. Henle, and which has met with support from other authors. It ought certainly be welcomed if the existing confusion with the denominations *flexor* and *extensor muscle* could forever be done away with.

We have to admit that the motion, for instance in the talo-crural joint around the frontal axis, by which the toes point downward and the heel upward, ought to be properly named a *plantar flexure*, and where the toes point upward and the heel downward a *dorsal flexure*. The muscles which cause the chief motion and are of more consequence to this joint than the ligaments, surround the joint in four groups, at least in regard to their functions. These four groups we may consolidate into two, placed on both sides of the *axis of torsion*. Like in every joint with one axis it possesses only two antagonistic muscle groups. All muscles which now lie in front of this axis of torsion are to be named *dorsal flexors* (m. tibialis antic; m. halluc. long.; m. extens. com. digit. long.), all other muscles with their tendons which lie *behind* this axis are then *plantar flexors* (m. peron. long. et brevis; m. tibial post.; m. flex. dig. com. long.; m. flex. hall. long.; and tends Achillis or gastrogn., soleus and plantaris). We may observe from the names *extensores* and *flexores*, that formerly a different action was thereby indicated, since the former *flexores* are in fact *extensores* and *vice versa*. The talus itself is not touched by either of these muscles, all motions of this joint are only indirectly transferred to that bone.

In conclusion and with reference to the treatment and cure of clubfoot, let me recapitulate. All *deformities* or *torsions* of the feet, may they exist in a *dorsal* or *plantar flexure*, in an *eversion* or *inversion with* or *without dislocation* of *one* or *the other bone*, and be the *distortion congenital* or *acquired*, caused by *paralysis*, or a *spasmodic contraction* (with the only exception of a *decubitus* or loss of single elements as in *bnrns*, or after *extensive wounds*) *can be cured with the sole application of gypsum bandages and without the additional use of tenotomies.*

Notwithstanding the preceding subject has exceeded the moderate compass I had originally drawn for this article, I cannot, perhaps, with propriety, come here to an abrupt termination, silencing the loud call for the application of the gypsum dressing in future wars. Just as there can be no doubt that in the last wars in Europe as well as in this country the efficiency of military surgery has been remarkably defective and far from what it ought to have been, so I venture the prediction that in future wars military surgery in a great measure will decide the fate and issue of battles. It shall not happen again that even the elementary rules of that science be as shamefully neglected, limbs and lives be wantonly sacrificed, the wounded be treated in the most outrageous manner and the laws of humanity as well as of common sense be trampled under foot.

The great maxims in war adopted by the best tacticians and since the time of Napoleon the first, so generally recognized, consist in bringing all the forces which can possibly be made disposable at once into action with an eye on the most vulnerable part of the enemy's line. What holds good in an accomplished military command in the fiery strife of battle, will equally be admissible in an expert military surgeon in trying to save limb and life by protecting the most vulnerable parts. Another great principle in military surgery which may be borrowed from war is never to do things by halves and not to postpone to a later hour what can be done at once. The best two conservative weapons of the armamentarium of a military surgeon are *asepsis* and *gypsum*, they belong to the heavy artillery of military surgery; in fact what in war the best infantry would be without artillery, that military surgery would be without asespis and gypsum.

The greater part of the mortality from gunshot wounds has to be accounted for by the imperfect treatment of the wounded, the want of proper and timely attention and transportation. Aside of the agonies, the suffering of the wounded from imperfect transportation in unsuitable vehicles, over rough roads, even the best aseptic dressing may prove unavailing and the life of the wounded be jeopardized, if means and ways are not found to render even a defective transportation a safe forwarding of the wounded to the next general hospital; and here it is where a solid occlusive gypsum bandage comes in, without which the best aseptic dressing will still be defective.

The late improvement in the military medical service, that every soldier in Germany shall carry some aseptic material for a temporary dressing of wounds received are half measures and as all such to be condemned if further steps are not taken of a more permanent character; if the wounded are not soon transported to the dressing place, the so-called flying field hospital near the battlefield.

The insufficiency of surgical aid so often bitterly complained of, in various armies might be obviated by carrying the dressing material to the front, including the dressing places. The handling of the proper dressing material can be taught to a number of the surgeons' adjuncts, who may be taken even out of the ranks, while the main surgical aid is applied and restricted to the examination of the wounded and the capital cases—amputation and resection. With the astonishing results of conservative surgery before me I have no doubt that the operation of amputation will be confined only to wounds caused by the greater destructive missiles.

In the establishments of the flying hospitals or rather dressing places, lies the future progress in military surgery. The application of the primary aseptic occlusive dressing to remain for weeks without being changed must be regarded as a necessity. No more of provisory bandages, but solid gypsum dressings impermeable to the atmospheric air, to fit the soldier to be transported with all the security possible. The best surgeons ought to be commanded to these dressing stations at the front. In compound gunshot wounds of the extremities after the wound has been incised and dilated the surgeon after previously having disinfected his hands and instruments will examine the wound carefully, removing all foreign bodies which might have been carried into the wound with the missile, as linen and parts of his clothing, and also splinters of bone, totally detached. If under a current of carbol water from the irrigator the clots of blood are removed and bleeding vessels secured, the wound is closed with aseptic silk sutures, completely Listered and encased with gypsum bandages as described in one of the preceding chapters. After the gypsum has become hardened a coating is given with copal varnish or melted paraffin with wax to render the porous gypsum perfectly occlusive against the access of air.

The prohibition of examining each wound with probe or finger is ridiculous. It is to be expected that the surgeon before he touches a wound has disinfected his hands or the instrument he intends to use. To expect a surgeon not to recognize the importance of removing all foreign bodies or loose detached splinters of bone which will act as foreign bodies, and permit a wound to become poisoned, a septic process to set in, would reflect on the capacity of the surgeon and make him unfit for the responsible position he occupied. Only thus treated will the patient be secured against secondary hæmorrhage or any other injury caused by the transportation; it will save him from the agonies usually occasioned by moving such wounded with shattered bones which a man must have seen to comprehend what suffering means. I cannot lay emphasis enough upon the importance of a proper gypsum dressing, and a surgeon wanting the experience of the benefits of that dressing will be in want of the elements to judge of its importance. It is astonishing to observe the recuperation and reparative faculties of the human system in often the most desperate and severe injuries under such an aseptic occlusive gypsum dressing.

Drains which play a great role in the open wound treatment are here totally inadmissible and positively to be prohibited in establishing a communication with the external air, rendering thereby the occlusiveness of the wound nugatory. The necessity of extending the immobilization to the whole respective limb and in wounds with fractured bones, comprising the thigh, including the pelvis itself, must become obvious. The bullet is the only foreign body in a wound which needs no removal provided its locality is not upon an important blood vessel where it may probably become injurious. Nothing should be left undone to prevent a too early removal of the primary dressing. It would be of great service to science if the surgeon engaged at the moving dressing place could afterward be transferred to the general hospital to take further charge of those who had been dressed under his eyes and which might well be done, since there is sufficient time from 3 to 4 weeks before the first dressing will have to be removed, provided that no other accidents happened. The intermediate field hospital which at present plays the main part ought to be entirely abolished. I have no doubt that with the wonderful results of this treatment to be obtained if they would become known the morals and the spirits of the troops would also be greatly enhanced.

At the late International Medical Congress a Dr. Watrazenski stated that he had had very unfavorable results with the gypsum dressings in gunshot wounds of the thigh before reaction had set in, and that he, therefore, preferred Volkmann's flat tin splint instead of the gypsum; and the more so after Bergmann and Reyher's experience that septic wounds could be made antiseptic, even after a fortnight had elapsed between the injury received and the first dressing.

In speaking of thigh wounds he probably had reference to those high up in the upper third, like his colleague Reyher, as we will soon see. I, therefore, will say here only that it ought to be our endeavors to avoid a wound to become septic, and that to deal with septic wounds would be a step backward instead of forward. And then a great deal depends in what manner the gypsum dressing is applied to give that potection necessary in these wounds. Volkmann's flat tin splint is an excellent contrivance to place such a wound upon in a hospital, but it would not answer for a transport. Of course no surgeon would place a limb in a solid gypsum bandage after the wound had become septic. In such a case it would be advisable to lay the limb half in gypsum, using the latter as a splint till the wound has been made antiseptic again.

The question comprising asepsis or antisepsis to be or not to be initiated near the battlefield induces me to make some further remarks to the opposition I have to contend with against what I have laid down in the foregoing lines. I am well aware of the apparent grave character of that opposition, but am not afraid. It is not a hypothetical or theoretical raisonné, but facts I have stated, and what I have seen or experienced cannot be disputed away by whomsoever the opposition may be led.

Professor Esmarch, and none is better and wider known in and out of his country, *against* his former opinions and statements "that the *point of gravity* of an *antiseptic treatment was on the battlefield itself*," declared during the discussion about antiseptic treatment in war in the late International Congress "that a genuine antiseptic treatment on the battlefield was impossible." And again: That as a paramount principle to be laid down consisted in "*non nocere;*" that he coincided with his Russian colleague that even "*some very severe gunshot wounds would remain aseptic if not touched or examined with dirty fingers or instruments.*" And again: "Every *insufficient* trial of *rendering wounds aseptic on the battlefield* as well as *examination of any kind ought to be omitted.*" Such words, such maxims, from such a surgeon! "Obstupui, steteruntque comæ, vox faucibus hæret." Here Esmarch has given us two diametrically opposed principles—once when his "point of gravity" of asepsis was on the battlefield, and this time when he condemned what he had before advised. May he not change his opinions a third time? I hope so; and then he will probably also tell us the difference between an "antiseptic treatment" and a genuine antisepsis, and what made *impossible* what just before was still the *point of gravity* of efficiency? Since when is the exception to become the rule? Since when are fingers and instruments to be condemned because some of them may be found dirty? And may not surgeons' fingers and instruments also become dirty at the field or general hospital? What kind of surgeons must Esmarch have had to deal with who would have thrust dirty fingers in the gunshot wound of a poor fellow, taking from him probably the last worldly chance of a recovery if the wound had been left untouched? It seems to me a grave affront and indignity Esmarch here offers to his assistants, if not to the whole profession. And because a wound may be rendered insufficiently aseptic is that a solid reason to let every wound alone, untouched, with probably dirty linen or pieces of dirty clothes in it, or will he risk in such a case even dirty fingers to remove the dirty rags? Is his parole really definite: "No examination under any circumstances?" In case the femoral artery should have been injured, or even a smaller one, say the tibialis postica, on which injury in the late War of the Rebellion in this country the great general of the Confederate States forces, A. T. Johnston, bled to death, should such a blood vessel not be ligated, though temporarily a clot of blood might have arrested the bleeding, but which would be started again, be it by a removal of that clod during the transport, or by a splinter of the shattered bone, and would it not have been detected by entering a finger and examing the wound? Why must there be dirty fingers? Do we not have soap sufficient to cleanse them? And is Liebig after all correct when he said that on the consume of soap we could recognize the civilization of a people? Is it really "*non nocere*" in permitting a wound to become septic; is it "*non nocere*" to let a man bleed to death; is it, finally, "*non nocere*" in depriving the surgeon, by a prohibition of any and every examination of a wound, from coming to a conclusion about the man's best chances of recovery if by amputation, resection, or by an act of conservative surgery? I would long have dropped this unsavory and unpleasant theme did it not come from a surgical authority, from a man who has so often called forth the admiration of his confréres. But that ought to be the best defence for to lay open its deplorable weakness.

Another difference between Esmarch and me is that he will have all and every thing done at the field hospital, while I am in favor for the providing of a dressing place near the battlefield, in utter condemnation of the field hospital as a source of irreparable mischief by becoming an inducement that the best and only time will be passed in which limb and life might have been saved. The proper device to carry for such a field hospital ought to be, "*morituri te salutant.*"

At the discussion of this theme at the International Congress there was not one dissenting voice from the great substantial benefit of *asepsis*, and the résumé was that only *want of time* and *material* could prevent its application. "*Want of time and material!*" as if time was not always present and need but to be grasped, and where cannon can be carried there is also room for the material on which limbs and lives depend. But there was in the whole assembly of great surgeons only one single brave and intrepid soul in favor of the dressing place at the first lines of fighting.

Dr. Reyher, of St. Petersburg, was

the man who laid with me the " point of gravity " at the front, where alone that dressing ought to be done, upon which depended the whole subsequent treatment. Reyher was also in favor of the " *debridement primaire*," laying the compound fracture wounds freely open by incision for the purpose of exploring, cleaning and asepticising them, which he had executed in the late Russian war at the dressing station with so good results. Results which previously had been unknown in field practice ; and he called attention to the difference between these his results and those obtained in the field hospitals in the late Franco-German war. While thus of seven primary excisions of the shoulder joint performed by him all succeeded without a single loss; the mortality in the Franco-German war amounted to 41,370, amongst 31 of such operations ! And what can be accomplished in Russia, the command over time and the transport of material, that should not be possible with people who even boast of a higher civilization ? The only exception with Reyher's general success were like with his colleague, Watrizinski, shot wounds high up in the thigh, where the debridement proved *always fatal !* Now why this exception ? Evidently from want of a proper immobilization, by which the upper segment of the bone, in which is inserted the powerful iliopsoas muscle, being under no control, can commit, under contraction of that muscle by constant displacement, all the mischief, the main of which consists in producing *secondary hemorrhage.* Had Reyher, like myself, fixated the hip joint by including the pelvis, the thigh wounds would not have proved the exception ; and the less so since he had not, like Watrizinski, to deal with septic conditions, the wounded having been dressed at the front and not after transportation at the field hospital. If the upper segment of the bone is properly secured, displacement prohibited and care taken that no severely injured part of lhe marrow remains, wounds comprising even the upper third of the thigh will make no exception of the common rule of wounds treated with an aseptic occlusive gypsum dressing under complete immobilization. The repeatedly fatal issue from secondary hemorrhage should have given Reyher a hint of securing the blood vessels in a better manner. The immobilization in such compound gunshot wounds in the upper third of the thigh is the *ne plus ultra* of surgical practice, and no greater error can be committed as to consider an injured marrow as a *noli me tangere.* The marrow is, next the blood, the most favored soil for the propagation of the schizomycetes. I have removed the entire marrow of the tibia in two cases without the least harm done to the bone. The only precaution taken was to permit the cavity to be filled with blood, which, under the protection of the aseptic dressing of Lister, became organized again.

And here is a fit place to clear up also a seeming contradiction between the views and experiments of pathological anatomists and the experience of practical surgeons. By the first we have been told that certain chemical compositions had no disinfecting power, whilst we are using them as such with benefit.

It is generally known that the illustrious sanitarian, N. Koch, of Berlin, Prussia, has by his strictly inductive method and well established experimental facts and tests proved that different infectious diseases had to be considered as the products of micro-organisms, schizomycetes or bacilli, though the microscope so far had failed to prove their existence. By the happy and original idea to try and render them visible by using various anilin colors (though Koch was not the first who had fallen upon that idea), Koch succeeded in thus making the bacillus visible in tuberculosis. What I for long had suspected in analogous infections and contagious diseases, as in yellow fever, that the reason why the micro-organisms, producing that disease, had so far escaped detection because they did not refract the light was here established by Koch as a fact in tuberculosis. Now Koch has also made known lately another aid to sanitarians and the surgeon, the very important fact that certain micro-organisms are not destroyed by certain substances we are in the habit of using as disinfectants. Koch stated that if such micro-organisms had been laid for more or less length of time in solutions of zinc chlorid, phenol, sulphate of iron or sulphurous acid, and afterwards into certain nourishing liquids containing protein substances, they would again propagate as usual, sufficient proof that they had not been destroyed by those so-called disinfectants. Koch stated further that certain schizomycetes, the bacteria of anthrax, for instance, were killed by iodine, bromine and chlorine, sublimate, osmium acid and permanganate of potash, which he therefore considered as disinfectants or septic substances, while on the other side zinc chlorid and phenol are entirely valueless as disinfectants. Such, of course, does not harmonize with our experience. In order to solve that obvious contradiction, Boillot made a number of interesting experiments, by which he established that when in wounds these micro-organisms had lost their qualities and did not further propagate, such was caused on account of the formation of those substances with the albumen into insoluble combinations, as zinc albuminate and phenol albuminate, provided that these substances had been taken in sufficient quantities to take hold of all the albumen, and with these new formations of albuminates those micro-organisms had lost the proper soil to thrive in or to multiply: and not before some time had elapsed would these albuminates, under the action of the oxygen of the air and water again be decomposed, or, if sooner fresh albumen had again appeared in the wound from the blood, would signs of putrefaction reappear or the bacilli thrive again. Thus is the apparent contradiction solved. Herewith is also the beneficial influence of the aseptic occlusive bandage proven. Another protection will the wound receive from the granulations, when the wound is near cicatrization, which seems to be no soil for certain micro-organisms to propagate in. Boillot has also examined the disinfectant qualities of iodoform. That substance, as well as bromtulnol, pyrogallus dimethyl ether and paracresol, have, with the exception of the cresol, if in solutions of only 1 per cent. strength, no disinfectant or anti-putrefactive qualities.

We surgeons ought to be satisfied with an aseptic remedy; if the signs of putrefaction be absent a length of time a wound needs to heal, and the wound remains inodorous during the healing process ; though the odor is no specific sign to recognize the septic or aseptic condition of a wound. Herewith all the requisites on an aseptic treatment are fulfilled ; absolute disinfecting qualities are not required.

INHALATION of five to ten drops of amyl nitrite will break up the chill of malarial fever; so will the hypodermic injection of one-sixth of a grain of muriate of pilocarpine.

IS QUININE AN ECBOLIC OR OXYTOCIC AGENT? By R. LEE PAYNE, JR., M. D., Lexington, N. C.

In a late number of the *Amer. Med. Weekly* there appears an article by Dr. Schuppert of New Orleans, in which, in confident terms, he claims for quinine oxytocic and even ecbolic virtues.

We have long ago made up our minds that quinia possesses no such properties and it may not be out of place to give the reasons for the faith that is in us. Let us first consider the agency through which a labor is set up and consummated, and we beg indulgence if in some respects the theory which we advance differs from the various opinions of obstetric authorities.

As soon as the ovum becomes impregnated, rapid and important changes begin to take place in the uterus. Its mucous membrane undergoes great transformation; its tissues are congested from the largely increased flow of blood; its muscular fibres become greatly developed, and pari passu —according to the dissections of R. Lee, since verified by other investigators, the nervous supply is augmented. The cervix uteri is under the control of the spinal cord but the body is entirely supplied with nerves from the great sympathetic system and to the influence of the organic nerves we may attribute the action of the unstriped muscular fibre in the parturient act. As the period of fœtal maturity draws near the utero-placental connection becomes more and more lax until at length the connection has become so feeble that fœtus and placenta alike become foreign bodies and the highly developed terminal nerve bulbs irritated beyond endurance a reflex action results bywhich the unstriped muscular fibre is set in motion and the woman falls into labor. We believe this theory, (a) because the uterine contractions in a natural labor are characterized by periodictly of activity and repose and we know that the contractions of all muscles supplied by the organic nerves are rythmical; (b) because the nervous supply of the gravid uterus is hyper-developed; (c) because almost all the causes of abortion are those which act through a reflex nervous agency, it being a well-known fact that uterine contractions may be induced by extremes of joy and grief, by the cold douche upon the abdominal surface, or by friction of the abdomen, by passing the hand into or tamponing the vagina, by violent movements or injuries of other parts of the body and many by other means too numerous to mention. Lastly we find foundation for this belief in the fact that the only means we have of preventing abortion in cases where the habit has been contracted or when from any cause the accident is threatened resides in the use of nervous sedatives, perfect rest of mind and body being enjoined and such remedies as opium, the sheet anchor here—and the viburnum prunifolium being freely administered while all local and general causes of irritation are as far as possible removed.

Looking upon labor then as being under the control of the organic nerves we naturally conclude that any stimulant of the sympathetic system of nerves will be oxytocic and may even be ecbolic in its effect Does quinine possess snch virtue? Let us consider its physiological action. Bartholow writes that in small doses it increases "a *little* the action of the heart and elevates the arterial tension. In large doses quinia depresses the action of the heart, diminishes the blood-pressure and enfeebles whilst it slows the pulse. . . . Quinia diminishes the reflex functions of the spinal cord." From this it would seem that in small doses quinia is a vaso-motor excitant but that after the administration of larger doses vaso-motor paresis ensues.

The experiments of M. Jerusalimsky further go to prove that in small doses quinia first excites the organic nerves but soon there occurs a depression and in larger doses depression occurs at once, the pulse-rate becomes much slower and death may result from paralysis of the vaso-motor cardiac-ganglia. In the light furnished by this knowledge of the action of quinine we can see no way in which it could possess oxytocic powers and if it does so it differs entirely in its mode of action from ergot and mistletoe which are both active stimulants of the sympathetic nerves. Apart from this, the clinical testimony has been opposed to the idea that quinine is oxytocic. M. Jean about the year 1845 claimed oxytocic power for quinine but his teaching failed to make any great impression. M. Monteverdi communicates the results of experiments on the action of quinia (*Nuova Liguria Medica*, 1871), and concludes, "That quinia exerts a general tonic influence on all the organs of the body, but especially upon the uterus. In the course of half an hour after it has been administered, short contractions occur in the uterus accompanied by pain: and these gradually become longer and stronger, with distinct intermissions, so as to resemble closely ordinary pains of labor, the effect lasting about two hours." He further asserts that its action is free from danger "at whatever period of pregnancy it be administered; or in cases of contracted pelvis, incomplete dilatation of the osuleri and antecedent to the escape of the waters." Unhappily for Dr. Monteverdi the results of other investigators have not sustained his conclusions and is not the fact, which he asserts, of the great safety of its administration in these cases of obstruction a grand argument against its oxytocic action? During the year 1877 Dr. Bauman of Ohio published in the *Amer. Med. Bi-weekly* a report of cases of abortion which he attributed to the use of quinia. These reports elicited much adverse opinion and criticism. The majority of the participants in that discussion were practitioners in the Southern states and with scare a dissenting voice the testimony was against its ecbolic action and very few indeed believed it to be possessed of the *slightest* oxytocic virtue. Drs. Guice and Fort each reported cases in which attempts were made to produce criminal abortion by the free use of quinine resulting in utter failure, and Dr. Swain reported several cases of threatened abortion relieved by the exhibition of quinine. Some of the participants in that discussion held that quinine relieves irritability of the uterus—and through the quieting effect which it exerts upon the sympathetic nerves no doubt this will be found true, and others still asserted that in rigid os and like conditions quinia has a relaxing effect similar to tartar-emetic. Dr. Payne, my father, (*Amer. Med. Bi-weekly*, '74), thought "It may be of use after labor has begun in delicate women of relaxed muscular fibre and general atonic condition; but in a large obstetric practice I have never seen it induce true labor pains, nor do I believe it ever does." Most of the supposed quinia-abortions have been reported from malarial districts and after carefully studying these reports, as far as I can obtain them, I am convinced that the accident should have been attributed to malarial poisoning. With the intense congestion of internal organs which malaria produces and the severe shock which the nervous system so often experiences during its excerbations we cannot fail to see how potent for evil it becomes to the pregnant female, nor is it hard to believe that doctors—filled with that one-ideaism which so often makes us ride a hobby, having once conceived that quinia is ecbolic should have fallen into the error of attributing abortions due to malaria to the remedy given to counteract this poison.

Dr. Plumb of Red Creek, N. Y., made himself ridiculous only a few years ago by reporting (*Amer. Jour. Med. Sciences*), the case of a woman flooding from placenta prævia who was happily and *speedily* delivered by the action of three grains of quinia. This report threw the countenances of the whole southern faculty into a broad grin of amused incredulity.

Dr. Schuppert gives a case of quinia-abortion which he regards as conclusive and I quote it in extenso: "A woman received an injury on her head near the right temporal bone. The wound was apparently not to be considered serious if it could only be kept in an aseptic condition. Carbolic water applications had been ordered by the attending physician, but unfortunately from want of proper nursing the aseptic condition of the wound was not obtained. The wound soon presented a diphtheritic appearance, and when the temperature increased the doctor ordered a dose of xv grains quinine. Meanwhile I had been called in consultation. Some hours after the administration of the quinine we were informed that labor pains had set in, a fœtus was born in time, which died soon after its birth and the mother followed a few days later from pyæmic intoxication." Now is this case conclusive? The woman had received an injury and even slight injuries have been known to be followed by abortion; the labor pains did not come on till "some hours after the administration of the quinine," but the elimination of quinia by the kidneys begins within half an hour after its administration, therefore the doctor should have told us how many hours passed after giving quinine before labor began that we might decide whether the system still contained quinine: Dr. Monteverdi has told us that the oxytocic effect of quinine begins in half an hour after its administration and is *completed in two hours*, but in this case labor did not set in for some hours; the woman died of pyæmia and what is more possible than that pyæmia might produce abortion. Again, before the doctor exclaims exultingly "How is that for high?" he ought to have shown us that the autopsy revealed no predisposing cause of abortion.

The best authorities do not sustain quinine as an oxytocic. Prof. Bartholow says, "It has been alleged to have an oxytocic effect, but the evidence which has been published in support of this statement is by no means satisfactory." Prof. Wm. B. Atkinson (Obstetric Procedure), likes quinine as a general stimulant in child-bed, but does not claim for it oxytocic virtues.

Prof. Goodell (*Nashville Jour. Med. and Surg.*), says the oxytocic action of quinine is "slow and uncertain." Bouchardat (Hand-Book of Materia Medica) says, "Many have thought, the sulphate of quinia, in a large dose, will produce abortion; but *very numerous* observations have proved that this salt cannot in any degree excite uterine contractions."

Cazeaux, (Theoretical and Practical Midwifery), speaking of abortion says, "I mention this influence of intermittent fever upon the pregnant condition only as affording an opportunity of discarding completely the advice of some persons who recommend the rejection of the sulphate of quinine as likely to produce abortion or premature labor. The miscarriage laid to the charge of the sulphate of quinine should certainly be attributed to the disease itself. * * * Not only is it an innocent remedy but the surest preventive means when abortion is imminent in consequence of the fever." Prof. Otis F. Manson who has recently published a monograph on the subject of quinine and who is regarded by many as an authority tells us, (Trans. Med. Soc. Va.) since he began to employ quinine in liberal doses in the treatment of malarial fever he has "never observed abortion in patients affected with them." He further disclaims all faith in its oxytocic virtue. Prof. H. C. Wood does not believe that quinine is oxytocic. The great mass of southern physicians have no faith in quinine as a parturient and the experiments of Drs. Gaston, Baldwin and Michel made under the auspices of the Montgomery (Alabama) Medical Society, to my mind proves very conclusively that quinine has not the slightest oxytocic action. The eminent European authorities on physiological therapeutics, Binz, Brequet, Ranke, Shulte, See, etc., etc., claim no parturifacient power for quinine. It seems therefore, that the experience of all those best able to judge is opposed to the idea of the oxytocic power of quinia. My ownexperience is in accordance, but if Dr. Schuppert can show me a case of abortion in which there was no possible cause outside of quinine and can explain some channel through which quinia may act in producing such results, either like ergot, through the organic nerves, or like savine aloes, etc., by producing congestion of the pelvic organs, then I am willing to believe all that he would teach.

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ECLECTIC DEPARTMENT.

"Carpere et colligere."

ON THE TREATMENT OF GUNSHOT WOUNDS OF THE ABDOMEN IN RELATION TO MODERN PERITONEAL SURGERY.* By J. MARION SIMS, M.D., LL.D., etc.

The death of President Garfield by the assassin's bullet has excited an intense interest in the public mind, throughout the civilized world, on the subject of gunshot wounds. It was at first supposed that the ball had perforated the liver and traversed the peritoneal cavity; but, as death did not occur in two or three days, it was then thought that it had been deflected down behind the peritoneum in the right iliac fossa. The *post mortem* examination alone revealed the true course and position of the missile. The wound was, then, not one of the peritoneal cavity; it was a flesh and bone wound, as much so as if the ball had perforated the thigh and shattered the femur. The President's case is, therefore, excluded from consideration here, as I propose to speak only of shotwounds involving the peritoneum. Besides. I have elsewhere (*North American Review*, December, 1881,) given my opinion of the President's wound and its treatment.

The great military surgeons of the day have long felt dissatisfied with the do-nothing system of treating shotwounds of the abdomen. Longmore and Legouest, Langenbeck and Nussbaum, and, in our own country, Gross and Woodward, Otis, McGuire, Kinloch, and others, have all plainly indicated by their writings the probable future treatment of such wounds.

Does the recent progress of peritoneal surgery lead to a better treatment of gunshot wounds of the abdomen? is the pressing question of the day, and must be solved sooner or later.

Ovariotomy is the parent of peritoneal surgery. It is based on certain fixed principles, essential to success, which do not belong to it alone, and cannot be monopolized by it. They belong to all operations involving the peritoneum, and to all organs contained in its cavity; and the governing principles of the one must govern all operations of the other.

Peritoneal surgery is a new domain, just opened to the profession at large by a few bold pioneers, who, in science as in the physical world, go before and blaze the way for us to follow and take possession.

The principles essential to success, which guide us in all these operations, were neatly formulated by Mr. Spencer Wells at the meeting of the late International Medical Congress. They are:

1. All hæmorrhages must be promptly controlled by pressure, ligature, or hæmostatic forceps. This principle is common to all operations.

2. The peritoneal cavity must be thoroughly cleansed after operation, and before the abdominal incision is closed. This is the great lesson taught by Thomas Keith, and followed by all successful operators.

3. The abdominal incision, usually in the middle line, must be properly closed.

Twenty years ago, Spencer Wells performed some experiments on the lower animals to prove the importance of uniting the divided edges of the peritoneum at the time of uniting the edges of the parietal section; and, as the propriety of this had lately been questioned, he thought it worth while to bring his pathological specimens from the Museum of the College of Surgeons before the late International Medical Congress, to demonstrate anew the great truth, long ago fully proven. But, independently of Spencer Wells's timely philosophic experiments on the lower animals, we have the best reasons, clinically, why we should always reunite the severed edges of the peritoneum. If the edges of the peritoneum are not embraced in the sutures that close the abdominal section, a raw surface is left on the inner face of the wound, which immediately adheres to the subjacent parts. If it happens to adhere to the omentum, well and good; but if to intestine, the result may or may not be fortunate. For, if the adherent intestine happen to be convoluted in such way as to obstruct the bowel, a fatal result may follow; and we cannot afford to risk the possibility of such accidents. Hence the necessity of uniting the divided edges of the peritoneum. Clinical experience furnishes still another argument why we should always unite the divided edges of the peritoneum. I have seen three cases in which the edges of the peritoneum were firmly united, while the parietal wound gaped widely open. Thus, if the peritoneum had not been closed, there would have been no union whatever in the line of abdominal incision.

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There is another principle in peritoneal surgery which is still *sub judice*, and that is—

4. Drainage or no drainage. Chassaignac was the first to demonstrate the importance of drainage in general surgery, and no one now pretends to dispute its value. He was the first to point out the source and dangers of septicæmia and pyæmia, and at the same to designate a preventive in his *stuebà drainage.*

The precepts and practice of Chassaignac are now accepted and acted upon every day and everywhere, but the name of this great French surgeon seems, for the moment, to be forgotten in this relation. In general surgery, complete drainage is essential to successful results. We cannot now dispense with it, whether we use antiseptics or not. If, then, drainage is so important in general surgery, why should we be so much afraid of it in peritoneal surgery? There is no special danger in introducing a glass drainage-tube into the peritoneal cavity at the lower end of the abdominal incision; for it immediately becomes sacculated, and thus nature protects the peritoneum against the presence of a foreign body in its cavity. If there be no bloody serum to drain off, the tube can be removed in a few hours; but if there be any serum, it soon makes its appearance at the surface, and is readily absorbed by sponges placed to receive it.

The drainage-tube is now wholly excluded by Spencer Wells, Thornton and many others, on the theory that Listerism renders the peritoneal effusion aseptic, and therefore that its absorption will not be attended with danger. But is this always so? In my early operations I occasionally saw cases where the accidental discharge of bloody serum through the external wound gave prompt relief of urgent symptoms, and led to speedy care. All other operators have had a like experience. With me, these were before antiseptics and drainage-tubes. But even now, under the best antiseptic precautions, are not such cases met with occasionally?

In December, 1878, I assisted my friend Mr. Spencer Wells with an ovariotomy in the suburbs of London. The case was a very bad one. Knowing full well its difficulties and dangers, he had wisely procrastinated the operation to the latest moment compatible with safety to his patient. Adhesions in the bottom of the pelvis were universal and very strong, and it was difficult to arrest the exudation of blood. When the external wound was being closed, Mr. Wells saw that there was some exudation still going on; but, thinking that Listerism had rendered it aseptic, he had no fears for the result. The patient did well for about thirty-six hours, when she became rapidly septicæmic, and fears were naturally felt for her safety. Fortunately, just at this juncture, bloody serum was found exuding from the lower angle of the wound. Mr. Wells then removed some of the sutures, and opened the wound a little; there was a free discharge of septic fluid, and the patient made a rapid recovery.

Now, I do not pretend to say that this patient would necessarily have died, if nature had not so unerringly pointed out the method of immediate relief to urgent symptoms. She might possibly have safely eliminated all this septic fluid; and then, again, she might not. But of this I am sure: if the drainage-tube had been used at first, the poisonous bloody serum would have been drained off as it was extravasated, and there would not have been the least cause of alarm for the safety of the patient.

The only valid objection that can be urged against the drainage-tube in abdominal surgery is, not in its immediate danger, but in its ultimate tendency to develop ventral hernia. And this is a serious objection, which we, who advocate its use, must learn to obviate. This is a problem to be worked out, and I am sure it can and will be done. But till then it is better, in doubtful cases, to risk the production of ventral hernia, with all its inconveniences, than to risk the life of the patient.

So much for principles of treatment governing all important peritoneal operations. Now let us see what has already been accomplished in this department of surgery in the last ten years, and then we can determine with greater certainty what we may reasonably expect in the next.

A review of this sort may be irksome for some of you, but, as my argument depends wholly upon what has already been done with such wondrous success in the domain of peritoneal surgery, I must be allowed to state the premises from which my conclusions are drawn.

Extirpation of the uterus for bleeding fibroids was a legitimate sequence of ovariotomy. At first, it was done by accident, then intentionally. The early operations were not successful; but now, Kœberlé and Péan on the Continent, and Spencer Wells and Thomas Keith in England, can boast of magnificent results; and already it is an accepted operation in properly selected cases. Péan's peculiar method of operating is by removing portions of the tumor, *morcellement* (as he terms it), till it is small enough to be easily turned out of the abdominal cavity. He then makes a pedicle of the cervix, and secures it in the lower angle of the abdominal incision, as we formerly did with the pedicle in ovariotomy.

The late Dr. Wright, of Cincinnati, the most successful operator in our country, tied the broad ligaments separately, amputated the uterus, then scooped out the cervix funnel-shaped, and brought together the opposing surfaces antero-posteriorly, united them by suture, and dropped the stump back into the peritoneal cavity, and closed the wound. Thus the amputated cervix was covered over with peritoneum, which protected the viscera against the dangers of adhesion to a raw cut surface.

Schröder, of Berlin, does the same, not knowing he had been preceded by our countryman, Dr. Wright.

And now comes Zwann of Holland (Internation Medical Congress), who greatly modifies Péan's method of operation. He makes the abdominal incision large enough to draw the tumor out of the cavity at once. After this, he then rapidly introduces three or four temporary sutures, closing the incision sufficiently to prevent the prolapse of the intestines. He next encircles the pedicle with a strong elastic cord, on the principle of Esmarch's bloodless method. He then amputates the tumor just above the cord, and finishes the operation as Péan does, by transfixing the pedicle antero-posteriorly, securing the ligatures one on each side, and bringing it out at the lower angle of the wound and fixing it there. After this, the abdominal incision is neatly brought together by sutures. The advantages claimed by Zwann are: 1. Facility of operating; 2. Protection of abdominal organs agaidst sudden chill; 3. Prevention of prolapse of intestines; 4. Bloodlessness of operation.

One of the most important advances in peritoneal surgery in connection with bleeding uterine fibroids is Battey's operation to bring about the menopause. It is likely to be substituted entirely for the more formidable operation of extirpation. It is less dangerous; it promptly arrests the bleeding. The fibroid growth begins immediately to decrease, and in some instances it has wholly disappeared.

Freund's operation of extirpating a cancerous uterus by abdomino-vaginal section has not fulfilled the expectations of its author.

Spencer Wells has recently performed successfully a Freund-Porro operation, extirpating a pregnant uterus at the sixth month, in which the cervix was cancerous (*British Medical Journal*, October 29th, 1881).

Bantock has also lately extirpated with success a cancerous uterus by Freund's method. These gentlemen have greatly simplified the operation (*ib.*, November 12th, 1881).

Half a century ago, or more, Blundell suggested the removal of the cancerous uterus by the vagina, and performed the operation. The Blundell vaginal operation has recently been performed successfully by Professor Beverly Cole, of San Francisco. He separated the cervix uteri from its attachments with a Paquelin cautery, pulled down the uterus, secured the broad ligaments, and removed the uterus by a comparatively bloodless operation.

Dr. Lane, of San Francisco, late Professor of Surgery in the University of the Pacific, has performed this operation successfully. So has Dr. Clinton Cushing, of San Francisco. Thus we see Blundell's operation for extirpating the uterus through the vagina has so far been monopolized by the surgeons of San Francisco.

Extirpation of the spleen cannot be claimed as an offshoot of ovariotomy. According to statistics worked up by the late Dr. Otis, of the Army Medical Museum, Washington ("Medical and Surgical History of the War," etc., part second, surgical volume, page 152,) the spleen has been extirpated between 1549 and 1849 sixteen times, with but one death; and between 1849 and 1869 ten times, with five deaths. The deaths were from hæmorrhage, immediate or secondary.

Splenotomy has lately been done by Péan, Spencer Wells, Martin (of Berlin), and others. I assisted at Spencer Wells's last operation. The patient died of secondary hæmorrhage. The spleen weighed ten pounds, and there were three pounds of blood in the peritoneal cavity. In this operation it is important to tie the pedicle in segments to guard against the possible slipping of the ligature.

Extirpation of the kidney by the lumbar region has been often done successfully. Martin (of Berlin) has removed the kidneys six times by abdominal section, with four recoveries. The operation has been done by others.

Laparatomy and cystorraphy were advocated by Vincent, of Lyons, at the International Medical Congress. The bladder has been wounded in ovariotomy and in extirpation of uterine fibroids. This accident happened once in the hands of the great ovariotomist, Washington Atlee. It happened in the practice of an eminent surgeon in the interior ot New York; and occurred to me in the removal of an enormous uterine fibroma. The bladder was cut across for several inches, as it was extensively spread out over the anterior face of the tumor. The wound of the bladder was closed with fine silver wire. The patient died a few hours afterwards of shock and hæmorrhage. Dr. Thomas reports a case where he found the bladder closely attached to the anterior face of an ovarian tumor. There was some doubt about it, and he cut into the bladder intentionally, passed his finger in to clear up the diagnosis, then closed the incision by suture, and the patient quickly recovered. With the lights now before us, we should be able to suture the peritoneal portion of the bladder with the same impunity that we do the vaginal.

Fischer, of Buda-Pesth (International Medical Congress, 1881), performed a series of experiments on dogs to establish the propriety of suturing wounds of the bladder. He says the success of the operation depends entirely on the accuracy with which the sutures are placed. He used catgut and antiseptic silk with equally good results. He infers that the operation will be more successful on man than on the lower animals, for the reason that a catheter can be kept in the bladder and irrigated antiseptically while the patient rests quietly in bed.

Billroth has recently extirpated the pylorus for carcinoma. But, as the ulterior results are always unfortunate, we can only admire the heroism and genius of the surgeon and the brilliancy of the operation, while we deplore its uselessness. But it proves conclusively what we dare do now-a-days in the region of abdominal surgery.

Gastrostomy has been often performed for the removal of foreign bodies and for artificial feeding. It has been done by Labbé, of Paris, for extracting a fork from the stomach of a man who swallowed it in a playful freak. And it has been recently frequently performed where the œsophagus was mechanically obstructed by stricture or malignant disease.

The Cæsarean section is rather going out of fashion. But if surgeons would take care to clean out the peritoneal cavity thoroughly, and then suture the incision in the uterus with silver wire, there is no reason why it should not be as successful as any other in the whole range of abdominal surgery.

Look through the literature of the Cæsarean section, and see the absence of all precautions to prevent sepsis, and can we wonder that the operation has not been more successful. How any surgeon could make an incision three or four inches long through the walls of an impregnated uterus, and then leave it open for the lochial discharge to run out into the peritoneal cavity is incomprehensible. By the light of modern science, and by the skill of the present generation of surgeons, there is no reason why the Cæsarean section should not again come into vogue.

Porro's operation, which is now accepted and lauded by all who have done it, is the professed substitute for Cæsarean section, and a direct offshoot of ovariotomy. It seems destined to be recognized as a legitimate and justifiable procedure. In Vienna, in 1878, I saw two cases a year after they were cured—one by Professor Späth, and the other by Professor Carl Braun. Professor Horatio R. Storer, of Boston, extirpated the uterus by abdominal section, on account of uncontrollable hæmorrhage after delivery, long before Porro's operation (1867); and by some writers it is called the Storer-Porro operation. Porro's operation is usually performed in cases of deformed pelvis, when the child cannot be safely delivered in the natural way. So far it has been more successful than the Cæsarean section, as heretofore performed; and it protects the patient against the dangers of a subsequent pregnancy.

Laparotomy, in mechanical obstruction of the bowels, has been frequently performed successfully within the last three or four years. This is another triumph following in the wake of ovariotomy. In America and Great Britain we are ahead of our French *confrères* in this operation. It was but the other day (July, 1881,) that all Paris was wrapped in gloom by the sudden death of one of its most promising young physicians, Dr. Chantreuil. Chantreuil was a man in the very prime of life, only about forty. Young and vigorous, he was doing a great work, and able to do it well. He was the picture of health; but one day he was suddenly taken with severe gastric pain. His friends hurried to his assistance. There was no relief; he rapidly sank, and died of intussusception in three days. French surgery must look to its laurels, for it has many; but it cannot afford to stand still while we move on. In no medical centre in this country or Great Britain could such a life as Chantreuil's have passed away without prompt efforts to save it. With the lights now before us, no man has the right to die of mere mechanical obstruction of the bowels.

Lumbar colotomy is frequently performed when the lower bowel is mechanically obstructed by carcinomatous or other foreign growth. It often prolongs life for twelve or eighteen months, and during this period gives complete relief to suffering. It has been done by abdominal section; but this has not yet come into general use. In the present state of our knowledge I believe it would be an easier and a safer operation than the lumbar, and it would make the artificial opening more convenient for comfort and cleanliness. It will eventually supplant the lumbar method.

Certainly the most important advance made in peritoneal surgery, growing out of ovariotomy, is Battey's operation for arresting ovulation and bringing about the menopause. This valuable contribution gives well-deserved fame to our countryman—fame that will endure, and, like that of McDowell, will become more brilliant as time rolls on. You know its literature, and the battles it has had to fight ever since it was brought before the profession in 1872. Its enemies are, day by day, deserting to the opposite ranks, and soon it will meet with no more opposition than does ovariotomy to-day. Its victory has been easier than that of ovariotomy, because the one is a mere corollary of the other. It is more difficult than ovariotomy, because the abdominal walls have not been distended and relaxed by internal centrifugal pressure, and because the offending organ does not boldly present itself at the median section as ovarian or uterine tumors do. The ovary lies deep down in the pelvis, and it is often difficult to find it, and sometimes more difficult to bring it into view. I think I have facilitated this part of the operation very much by the use of my uterine redresser. Sometimes the uterus in these cases is retroverted, and then it is still more difficult to reach the ovaries and bring them to the surface. Whether the uterus be retroverted or not, it will materially aid our endeavor if the uterine repositor be used to elevate the fundus uteri to the lower angle of the abdominal incision. Here it must be held firmly in position by an assistant. By rotating the handle of the repositor on its axis to one side of the patient, the opposite ovary is made to approximate the abdominal incision, so that the finger following the Fallopian tube soon finds the ovary, which is drawn into view, and then the pedicle is tied and the ovary removed. In like manner the opposite ovary is dealt with, by turning the handle of the repositor in a contrary direction, and the operation is finished as in ovariotomy.

When we first began to perform this operation we were less successful than at the present time; but the labors of Lawson Tait and of Thomas Savage, both of Birmingham, prove that the operation is quite as safe, and quite as successful as that of ovariotomy. Thomas Savage has performed the operation thirty times without a death. Lawson Tait has done it more frequently than any one else—seventy times—with marvellous success. His unlucky cases have been those for intractable bleeding fibroids.

The operation has been done often, and with great success, by Hègar, of Freiburg, and by Spencer Wells, Professor Simpson, Heywood Smith, and others in Great Britain. Indeed, the operation, as performed by our brethren in England, is no longer on its trial. It is now accepted there as a legitimate operation by every gynæcologist who pretends to be a surgeon. Battey thinks it very important to do the operation with the utmost thoroughness, not leaving the smallest particle of ovarian stroma. Lawson Tait goes further, and insists that the Fallopian tubes should be removed with the ovaries, if we would hasten the advent of the menopause. It is for this that the operation was projected, and for this that it is now performed.

In April, 1878, I operated on a case of dropsy of the gall-bladder. Having published the case in detail, I shall but briefly allude to its general features. I drew off the contents of the gall-bladder by aspiration. The sufferings of the patient were temporarily ameliorated. The sac soon filled again. I then conceived the idea of cutting down on the sac, of opening and emptying it, and then of securing the edges of the incised sac to the edges of the abdominal incision. This was done; but the patient was too much exhausted before operation, and died two days afterwards of black vomit. The blood had become so disintegrated by the admixture of bile that it was unfit for sustaining the vital powers; and her death was just such as we see in yellow fever, by black vomit. The post mortem examination showed that the operation was a perfect success. The gall-cyst had adhered to the abdominal parietes, where it was secured by suture. There was no peritonitis, and no evidences of inflammatory action were anywhere to be seen. In this case I removed sixty gall-stones, varying in size from a pea to a filbert.

The success of this operative procedure in this case established a principle which has been applied by Lawson Tait and others with marvellous results in peritoneal surgery. Lawson Tait has once performed successfully the operation of cholècystotomy as above described, and he has applied the same principle in operations for hydatids of the liver. He cuts down on the tumor, and then empties it by aspiration. He then incises the cyst to a proper extent, cleans out its cavity thoroughly, sews the cyst-walls to the edges of the abdominal incision, and introduces a drainage-tube. He has done this hepatotomy in seven successive cases in the last two years, and effected a perfect cure in every one of them. In every instance the substance of the liver was incised to reach the hydatid cyst. In one the thickness of liver-tissue through which he cut "was nearly an inch" (*Birmingham Medical Review*, Oct., 1881,). In all, the liver was itself stitched to the walls of the abdomen. This is certainly a brilliant achievement in peritoneal surgery, and establishes a precedent that we may all safely follow hereafter. It simplifies and perfects a method of operating in a class of cases in which heretofore we dallied, hesitated, and temporized. But Lawson Tait has formulated a rule of action, and demonstrated its successful application, which gives us confidence in the future. He has carried the same principle to the treatment of hydronephrosis. He has operated six times successfully for this in the last two or three years. He opens the abdomen in the middle line, punctures the cyst, guards the peritoneal cavity against the admission of cystic fluid, opens the cyst to the proper extent, and then stitches the cyst-walls to the edges of the abdominal incision, and introduces a drainage-tube. Professor Czerny, of Heidelberg, performs this operation in the same way in hydronephrosis, empyema of the pelvis of the kidney, and echinococcus, incising the cyst-walls, and attaching them to the external opening.

Lawson Tait has also carried out the principle of suturing cyst-wall to abdominal incision, followed by drainage-tube, in other cystic diseases within the peritoneal cavity. These operations may be classified as follows: Abscess of spleen, 1; extra-uterine pregnancy, 6 (1 death); hæmato-salpinx, 1; hydro-salpinx, 2; pyo-salpinx, 3; hydrometra, 1; hydatid tumor of liver, 8; cystic abscess of liver, 1; dropsy of gall-bladder, 1; pelvic abescss, 18. All these were treated on the same principle—viz., stitching the cyst-walls to the abdominal incision; and all recovered except the one case of extra-uterine pregnancy, in which the operation was too long delayed. Thus, of forty-two operations involving cystic disease in the peritoneal cavity, he lost but one. His marvelous success in all these proves the correctness of the principle of operating, and makes the way clear for other surgeons.

Lawson Tait has gone ahead of us all in opening up new fields in the great domain of abdominal surgery. He has done it all in the last three years, simply by adopting the principle set forth in the operation of cholècystotomy. His success establishes this procedure and these operations as legitimate, and compels us to accept them without question as he presents them to us. Well may I close this hurried *résumé* of recent advance in peritoneal surgery in recounting these brilliant achievements of Lawson Tait. By his daring and skill he has made easy for us many things that were before attended with difficulty and danger. He is now the leader in this department of surgery, and has succeeded in opening up fields of great fertility, which we may all freely cultivate with profit.

I have now given you, as hurriedly as possible, a brief outline of the work lately done in peritoneal surgery. The whole of it is the outgrowth of ovariotomy. Most of it has been done since Battey first performed his operation in 1872, and a very large part of it in the last three years. This work became possible as ovariotomy grew more and more successful. The principles of peritoneal surgery are now so well established, so thoroughly understood, and so successfully put in practice, that we are bound to achieve still further triumphs in this direction. Believing firmly in the lessons of this retrospect, let us now look forward, and forecast where, and to what, they necessarily lead us. Past success, based on principles universally applicable, guarantees like results under analogous circumstances.

The great Dr. Physick, of Philadelphia, was, many years ago, called the Father of American Surgery. One of the most important and original of his operations was that for artificial anus, which, until his day, had been seldom cured. His operation was based on an accurate knowledge of physiological laws; but it was not always applicable, and not always successful. Well do I remember a case in Paris, in 1867, on which M. Nélaton had operated several times unsuccessfully, and how he deplored the uncertainty of his art. This was before we had learned with what safety we could freely lay open the peritoneal cavity. Doing this now with absolute impunity, we can cut loose the injured bowel from all unnatural relations; resect portions of it, if need be; apply sutures where necessary; and return it, in a normal state, to the peritoneal cavity. There is now evidently a great future for this operation; but it must not be forgotten that, from long disuse, the lower end of the wounded bowel becomes abnormally contracted. Before uniting the upper and lower ends of the injured bowel, it will be necessary to dilate the latter mechanically. Dr. Kinloch, of Charleston, Professor of Surgery in the Medical College of that city, has already performed this operation.* A shot-wound (October, 1862), of the abdomen resulted in artificial anus in the right iliac region. The patient was eventually worn out by suffering and inanition. Dr. Kinloch opened the abdomen (June, 1863), excised half an inch of the upper portion of the ileum, and two inches of the lower, which last was abnormally contracted for want of use. He then united the two cut ends of the intestine by silver wire, and closed the wound. On the third day some of the intestinal sutures gave way, and there was a fæcal discharge. Dr. Kinloch succeeded in substituting a small fæcal fistula for an extravasating artificial anus; and would have succeeded perfectly in his well-planned timely operation if he had had the means of securely co-apting the ends of the wounded intestine. Too much credit cannot be given to Dr. Kinloch in initiating an operation that must become the rule of practice in the future.

Fallopian pregnancies, terminating in death by hæmorrhage from bursting of the Fallopian tube, a few weeks after conception, are not uncommon. Almost every practitioner of thirty years has seen such cases. One of the deputy-coroners of New York made necropsies in ten cases in five or six years. Four of my young friends died in this way. I saw one of them with Dr. H. D. Nicoll in New York in 1874. The patient, aged 30, mother of two children, was taken suddenly at seven o'clock in the morning while dressing. Dr. Nicoll saw her in an hour. I saw her about 2 P. M. She was then in collapse. We had no doubt that she was dying of internal hæmorrhage, or of perforation of the bowel. She died in twelve hours from the time of the attack. The *post mortem* examination showed the peritoneal cavity to be full of blood. If we had in time opened the abdominal cavity, it would have been easy to secure the bleeding Fallopian tube. But the golden moment for this had passed before we grasped the case in its entirety, and a valuable life was lost. With a sharp diagnosis and prompt action nothing would be easier, now, than to save life under these circumstances.

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* *American Journal of Medical Sciences*, July 1867; and *Medical and Surgical History of the War*, etc., part second, surgical vol., p. 113.

The late Dr. Stephen Rogers, of New York, wrote an admirable monograph on Extra Uterine Fœtation, in 1867. He reviewed the subject in all its bearings and said: "To me, therefore, a correct diagnosis indicates, as the first thing in order, the prevention of any further loss of blood; to accomplish which there is no choice of methods; *the peritoneal cavity must be opened; the bleeding vessels must be ligatured.*" Roger's advice must beeome law for our future government.

The illustrious George McClellan, the father and founder of Jefferson College of Philadelphia, was a truly great surgeon—bold, original, brilliant and successful. In the year 1847 McClellan left his home one bright May morning to make his usual daily rounds. He walked erect along Chestnut street, seemingly full of health and vigor, going from house to house to see his patients; while his coachman drove leisurely along, waiting whenever his master entered. Soon he was seen slowly descending the steps of a marbled mansion, bent over with agonizing pain. He entered his carriage, and was driven rapidly home. His medical advisers were summoned. In ten hours he was in collapse, and in six hours more he was dead. He died of perforation of the bowel below the sigmoid flexure. The cause of death was shock and septicæmia.

We often see patients dying of perforaton of the bowel, from wasting disease—such as chronic diarrhœa and typhoid fever. In these cases, the poor sufferers are too exhausted, too near death's door, before the perforation occurs; and we can only look on, try to ameliorate symptoms, and wait for the end. But George McClellan was in the prime of life; and would, in all probability, have lived to a ripe old age but for this sudden taking off.

Given a case of perforation of intestine in such a man as George McClellan, and, given a correct diagnosis, which is by no means difficult—what are we do in the present state of our knowledge? Why, of course, we should open the abdomen promptly, clean out the peritoneal cavity, search for the perforation, pare its edges, and bring them together with sutures; and treat the case as we now treat other cases involving the peritoneum. Rest assured that the day will come, and it it not far off, when an accurate diagnosis in such cases, followed by prompt action, will save life that must otherwise quickly ebb away; and the same thing must be done in gunshot wounds of the abdomen.

Death from wounds of the abdomen may occur from shock, from hæmorrhage, or from septicæmia; seldom from peritonitis, properly speaking. When from shock or hæmorrhage, there is no reaction, and death is comparatively sudden. Reaction once established, shock is over, and direct danger from hæmorrhage is passed. The great danger is septicæmia from effusion into the peritoneum. Some years ago it was thought that peritonitis was the chief cause of death after ovariotomy. But this is not the accepted doctrine of the present day.

In 1864 Sir Joseph Oliffe and myself assisted M. Nélaton in an ovariotomy. There was nothing unusual in the case. It was a multilocular tumor without adhesions; just such a case as would now be promptly and certainly cured.

Twenty-four hours after the operation I saw that the patient must die, and told M. Nélaton she was dying from an effusion of a reddish serous fluid in the peritoneal cavity, and I suggested to him then to puncture the *cul-de-sac* of the vagina, to let it run out. It was not done; and she died forty hours after the operation. I assisted M. Nélaton and Sir Joseph Oliffe at the *post mortem* examination, and we found precisely what I had predicted, viz., a large effusion of a sero-sanguinolent fluid—a quart or more—in the peritoneal cavity. She died of septicæmia, but we did not then understand it. However, from this time the idea that septicæmia and not peritonitis was the usual cause of death after ovariotomy, took complete possession of my mind, and I was on the look-out for other *post-mortem* reports.

Within a year from this date (1865) Mr. Spencer Wells published his standard work on ovariotomy (*Diseases of the Ovaries*, by T. Spencer Wells, F. R. C. S., etc., London, 1865), giving the necropsies of all his fatal cases. I ran hurriedly through it, and analyzed its *post mortem* reports. These confirmed my previous views, and fully established the fact that the great majority of deaths following ovariotomy was the result, not of peritonitis, but of septicæmia; septicæmia caused by "bloody serous" or "ichorous serous" fluids in the pelvic cavity. Mr. Spencer Wells's necropsies established this great truth—one of the most important as yet developed in the progress of ovariotomy. He did it, not knowing what he had done, and not realizing at the time the grand results that would follow. And when I published my views on this subject (1872), proving their correctness by analysis of Mr. Spencer Wells's thirty-nine fatal cases, and by my own subsequent personal experience, he in common with the majority of ovariotomists, at first rejected my interpretation of his facts.

In New York I was for a while alone in the advocacy of the universality of the doctrine of septicæmia in deaths from ovariotomy. Dr. Gaillard Thomas was, I believe, amongst the first to accept it; but it was not generally accepted till indorsements came from Europe, first from Professor Humphrey, of Cambridge, and then from Professor von Nussbaum, of Munich. They were followed by others, mostly in Germany. The indorsement of German surgeons had much to do in influencing opinion amongst us. At last Listerism (1876) was applied to ovariotomy, and this was the complete triumph of the doctrine of septicæmia in ovariotomy, as in other departments of surgery.

It would be an odd and unique freak in the laws of nature if other wounds of the peritoneum should not follow the same course as those made by the surgeon's knife in ovariotomy. How easy, then, the transition of this law from ovariotomy to gunshot and other wounds of the peritoneal cavity. Nothing could be more natural; nothing more logical.

After the analysis of Mr. Spencer Wells's cases I was convinced that we should find the same pathological appearances in shot and other wounds of the abdomen, that we found in fatal cases of ovariotomy; but my conviction remained only such till the following case occurred to prove their truth :

In November, 1869, Mr. Richardson was shot in the abdomen, in the *Tribune* office, New York. The poor fellow lived five days. The *post mortem* examination was made by Dr. J. Cushman, assisted by Drs. Finnell, Morton, Swan, and Clark, ten or twelve hours after death. They found "a gunshot wound of the abdomen, five inches below the left nipple, and a half-inch to the left of the median line. The direction of the wound was inward, downward, and backward, and to the left of the spinal column, one inch above the crest of the ilium. The ball traversed the left lobe of the liver, two inches from its anterior border, passed through the stomach and ileum, and then along the lower end of the kidney to the point at which it was extacted. The abdominal and pelvic cavities containing *about thirty-two ounces of bloody fluid.* Death, in our opinion, was caused by peritonitis."

I had looked forward with the greatest interest for this *post mortem* report, and was not the least surprised when I heard that the peritoneal cavity was full of bloody fluid. The peritonitis was only of the agglutinative character; such alone as showed nature's efforts to protect vital organs by the exudation of plastic lymph.

This was a case that, with the lights now before us, might have been saved by timely operation. Richardson lived five days and a half, an unusual length of time after such wounds. The wound of the liver was not necessarily mortal. The perforation of the stomach and the ileum could have been safely sutured, and the peritoneal cavity cleared of the quart of bloody fluid, which caused death by septicæmia.

We all remember the death of Mr. James Fisk, of New York, the great financier. He was shot in the abdomen (January 6th, 1872), as he was ascending the private stairway in the Grand Central Hotel As soon as I heard of the shooting, I told some of the doctors in attendance that he could be saved only by abdominal section, clearing out the peritoneal cavity, and repairing the damage done by the bullet to intestines and blood vessels; otherwise he would die of septicæmia. He died in eighteen hours. *Post mortem* examination was made by Drs. Janeway and March eleven hours after death. Drs. Wood, Sayre, Phelps, Tripler, Fisher, Beach, and Shine were present. The ball "entered six inches above the umbilicus, and one inch and a half to the right of the middle line; passed downward and to the left through the omentum and mesentery, piercing two loops of the small intestine, and was found in the left inguinal region, about twenty-two inches below the point of entrance. There was little or no hæmorrhage." I was present at the necropsy. There were from four to six ounces of bloody serous fluid in the pelvic cavity. I was standing by the distinguished surgeon James R. Wood at the time, and called his attention to it. No importance was attached by those who made the necropsy to the presence of the reddish serum, as no allusion was made to it in their *post mortem* report.

Here there were two perforations of the ileum and a wound of the omentum and mesentery, all easily reached and remediable by the present resources of our art. This was only nine years ago; but at that day and time the old dread of opening the peritoneal cavity still hung like a pall over the medical mind. Peritonitis was then the bugbear that it had been for ages; but we have stripped it of its terrors; for, with the light of science and the confidence of experience, we now constantly explore the abdominal cavity with the utmost impupunity.

It was said that Mr. Fisk died of shock. The term *shock* covers up a vast deal of ignorance. What would some of us do if it were not for the words *malaria*, *neuralgia*, *cold?* So it is with shock. I do not pretend to say that men may not die of shock; but death from shock, uncomplicated with hæmorrhage or septic influences, is rare indeed. To say that a man like Mr. Fisk died of shock is begging the question. He was in the prime of life, and in robust health. I have never seen the *post mortem* examination of a man so absolutely perfect physically. Not a flaw was to be found in any of his organs. He had no weak, flabby or fat heart, and no valvular trouble. His kidneys and all other organs were in a perfect state. About ten hours after the shooting, reaction was sufficiently established for him to dictate his will to a lawyer, and then to see his wife. In three or four more his mind wandered a little; he became comatose, and died eighteen hours after of the wound.

It is absurd to say that a great, strong, healthy man died of shock, when there was only a perforation of two superficial loops of small intestine to account for it; but it is quite reasonable to say he died of septicæmia, when there was sudden perforation of intestine, with extravasated flatus and fluids, especially when we find bloody serum or other foreign fluids in the peritoneal cavity, even in small quantities. In the case of Mr. Fisk there were from four to six ounces of bloody serum in the pelvic cavity. It is not the quantity, but the quality, of the exudation that kills. In some of Mr. Spencer Wells's earlier ovariotomies he saw blood poisoning produced by very small quantities of "ichorous fluid" in the peritoneal cavity; and in one case his own hands suffered from it.

We have yet to learn that the vital powers may be as suddenly overwhelmed by septic agents in a concentrated dose as by opium in a concentrated dose.

I have seen nausea, vomiting, exhaustion, incoherent talking, dizziness verging into coma, instantly relieved by washing out two or three teaspoonsfuls of turbid sero-purulent matter from a septic pus-pouch behind the body of the uterus; and then, in two or three hours more, all those symptoms of prostration and blood-poisoning would be reproduced, and then relieved in the same way, again and again, till a counteropening was made in the bottom of the sac, which permitted continuous drainage through the vaginal *cul-de-sac;* this saved the life of the patient. One must see such things to realize the rapidity of blood-poisoning by concentrated septic material. Let me repeat that there is no more reason why the system should not be suddenly overwhelmed by the rapid absorption of concentrated septic fluids, than by the rapid absorption of an overdose of morphia. Opium in sufficient quantities may kill in from eight to twelve hours. Septicæmia may do the same thing often in less time.

When I went to Sedan, as Surgeon-in-chief of the Anglo-American Ambulance, in August, 1870, I went hoping that I might be able to do something to elucidate the subject of the treatment of gunshot wounds of the abdomen; but, unfortunately, the cases that came under my obervatiod were moribund, and therefore, beyond all hope of relief. But I learned this great truth—that they all died of septicæmia, the *post mortem* examination showing large quantities of bloody serum in the peritoneal cavity in every case, evidently the source of blood-poisoning; while there was not the slightest trace of peritonitis. There was not a single exception to this. From what we saw there, I felt more convinced than ever that all cases of shot-wounds of the abdomen, that did not speedily die of hæmorrhage, always died from septicæmia, the result of large quantities of bloody serum in the peritoneal cavity, and not from peritonitis.

In ovariotomy, we see patients dying of septicæmia when bloody serous fluid is retained in the peritoneal cavity; and we see them recovering if we prevent the exudation of this fluid, and recovering with equal certainty if we drain it off after or as it is formed. This is an important lesson in peritoneal surgery. The principle established by it is applicable to all other wounds of the peritoneum, whether made by accident or by the surgeon's knife, by puncture or by bullet. In other words, wounds of the peritoneum, however made, have a common course to run, and are all amenable to the same general laws. Here, then, is the similitude between deaths from ovariotomy, from perforation, and from gunshot wounds of the peritoneum. In all these, patients may, and do, die of peritonitis; but this is not the rule. It is not the universal law; it is rather the exception. And, even if peritonitis should complicate a septicæmic case, there is no reason why we should not proceed precisely as if such complication did not exist. Indeed, I am convinced that the time will soon come when peritonitis, properly so called, will be treated by abdominal section and clearing out morbid products from the peritoneal cavity. Nature cures peritonitis in its early stages by uniting contiguous inflamed surfaces by intervention of plastic lymph. But, if the inflammatory process go further than plastic exudation; if it terminate in pouches of pus in folds of the intestines, or in purulent effusion in the peritoneal cavity, as seen in puerperal peritonitis—then death follows from the absorption of these puriform collections, which prodnce blood-poisoning, whether called septicæmia or pyæmia. In this stage, why should we not open the abdomen before it is too late; liberate adhesions; remove matter, whether imprisoned in pouches or free in the pelvic cavity; clear out deadly foreign products, and thus get rid of septic agents, just as we do with bloody serum after ovariotomy?

In the one case, the source of poison is generally locked up in little pouches; in the other, it is free in the peritoneal cavity, and usually in the pelvic portion of it. In searching out and removing the products of peritonitis, it would be necessary to examine every inch of intestine and every portion of omentum involved in adhesion. This can be done, and it will be done; for it is but the imitation of nature's clumsy efforts in this direction; and, when we follow the laws of nature, we are sure of going in the right course.

Bristowe says: "In a large number of cases, and especially in such as result from the perforation of some viscus or sac, and the escape of irritating matters, general peritonitis of the ordinary adhesive character is at once excited, and the effused matters consequently become confined to some limited district or districts. In many cases, a circumscribed abscess is thus produced, which may possibly undergo cure by the discharge of its contents, either externally or into the bowel." It would be better to do this work promptly by surgical interference, than to wait for the slow and uncertain efforts of nature.

But, to return to our subject; let us look at blood-poisoning from a peritoneal point of view. Septicæmia and pyæmia are caused by the absorption of putrid fluids. The septicæmic putrid fluid is bloody serum in the peritoneal cavity. Pathologists will give us its peculiar characteristics.

The pyæmic putrid fluid is vitiated pus, generally in peritoneal pouches, the result of peritonitis. Septicæmia often kills rapidly; peritonitis always more slowly. Death may result in a few hours from the one, while it takes days for the other. Peritonitis poisons more slowly, and is really less dangerous. The reason of this is very simple; but I do not know that pathologists have explained it. It is this. In septicæmia following ovariotomy, the septic bloody fluid is exposed to an immense absorbing surface—the peritoneum—which takes it up as rapidly as does the cellular tissue a hypodermic dose of morphia. In peritonitis, the septic purulent deposits are segregated and in small quantities, and exposed to small absorbing surfaces. The difference, then, is in the large amount of poisonous material and the large free absorbing surface in the one case, and the smaller amount of septic material and the small area of absorbing surface in the other. Besides this, sepsis by bloody serum is a more concentrated poison than sepsis by pus or puriform collection.

Pyæmia from peritonitis kills more rapidly than pyæmia from purulent collections in other parts of the body. Perhaps the reason is to be found in the fact that the pus-pouches, bounded all round by convolutions of intestine, may be thus exposed to osmotic influences of intestinal gases and germs. The distinctions here drawn are not in accordance with the doctrines of the day; but they are not based on theory: they are the result of clinical observation and *post mortem* examinations. True, I have seen but few fatal cases of peritonitis following ovariotomy. According to my experience, they are about as one in ten, compared with septicæmia.

The presence of bloody serum in the peritoneal cavity, when there has been wound of bowel, with escape of flatus and intestinal contents, is not surprising; and it is always found when we know how to look for it. Heretofore, the necropsists have expected to find peritonitis in every case of death following wounds of the peritoneum, because they were not prepared for anything else. Educate the medical mind in the truth, and it will always grasp and appreciate it. I have more than once seen necropsies made by men of reputation as pathologists, who, as soon as they saw the intestines agglutinated by plastic lymph, would say: "Here is peritonitis; here is the cause of death." They would then proceed to run a sponge down into the pelvic cavity, and bring it up full of bloody serum, and squeeze it out into a basin, without attaching any importance whatever to it. A peritonitis that stops at agglutinating contiguous serous surfaces is not dangerous; never fatal. It cannot end in death unless it proceed to purulent infiltration; and then it is almost always fatal—fatal, because it produces blood-poisoning, for which there is no remedy, and never can be, till we open the abdomen, and remove the purulent deposits the source of the blood-poisoning, just as we have opened it after ovariotomy, and removed bloody serum, which was the source of blood-poisoning.

The records of the American civil war contain but few fatal cases of shot-wounds of the abdomen that did not die of peritonitis, so-called Twenty years ago, when our war began, none of us knew any better. We hardly knew the term septicæmia, and knew less of its causes and nature. I shall never forget the surprise manifested by M. Nélaton, in 1864, when he saw a quart of red serum in the peritoneal pelvic cavity of his patient dying from ovariotomy. If he, the great surgeon of his day, did not understand it, how could men of less knowledge and less opportunity properly interpret it? If the army of surgeons with the two great opposing forces in our civil war had had the knowledge of the present day, their *post mortem* reports would have told a different story; for the laws of nature are uniform, and the wounded peritoneum would have poured out the same bloody serum then that it did at Sedan, and does now.

Bloody serum is an ordinary result of any gunshot-wound in the fleshy parts of the body, and it is not unnatural that it should be found in wounds and bruises of the contents of the peritoneal cavity. It is possible that the escape of flatus and contents of the intestines into the peritoneal cavity may give an intensity to the poisonous qualities of the bloody serum that it would not have without it; for, as said before, death results more rapidly from this than from peritonitis pure and simple.

In 1872, I published my paper on Ovariotomy, proving that septicæmia, and not peritonitis, was the usual cause of death after ovariotomy. In this paper, I said (p. 85): "I have alluded to my Sedan experience, because I believe it establishes very clearly that the principle of drainage at the most dependent part of the peritoneal cavity is the correct method of treating wounds of the peritoneum. Pleuritis was formerly occasionally fatal, but no one now dies of it. It terminates in an abundant effusion, that may kill by suffocation; and, again, in the exudation of purulent fluid that kills by blood-poisoning. But in this enlightened day, death never occurs in this way, because the effusions, whether benign or pyæmic, are promptly evacuated and life is saved; and so it will be in diseases and wounds of the peritoneum. The time will assuredly arrive when peritonitis, so-called, will not kill, because we will learn that effusions in the peritoneal cavity may be as safely evacuated as those of the pleural cavity; that the danger will consist, not in opening the peritoneal cavity, but in keeping it closed, with its retained fluids to poison the blood and take the life of the poor sufferer. The time will also come when gunshot and other wounds of the abdomen, and perforations of the intestine, will be treated by opening the peritoneal cavity, and washing out or draining off the septic fluids that would otherwise poison the blood; for death, in all these cases, is produced by the same cause, and in precisely the same way, and they will require the same plan of treatment."

Thus it will be seen that I advocated the same line of treatment ten years ago in shot wounds of the abdomen that I plead for to-day. But the profession was not then prepared for such radical views, and they fell stillborn. Ovariotomy was not then as successful as it is now; Battey's operation had not seen the light of day; the great domain of peritoneal surgery had not been opened up; and I know of but one man who was ready to accept my doctrines. Hunter McGuire, Professor of Surgery in the Richmond Medical College, Virginia, and surgeon to Stonewall Jackson's command, looking back upon his immense experience during our great civil war, recalled cases and *post mortem* examinations that could be explained only as it is done now. As President of the Surgical Section at the last meeting of the American Medical Association (June, 1881), Dr. McGuire read a paper on Gunshot Wounds of the Abdomen, advocating the same views as I do. In this paper, he gave the histories of four cases that are unique in military surgery, not because such cases never happened before, but because no one, as far as I know, had observed the facts and published them before. Two of them occurred during the war, and two in private practice since then. In all these cases, the ball passed transversely and superficially through the walls of the abdomen, wounding or bruising only the peritoneal lining of the abdomen, not perforating it, or wounding the intestine, or even the omentum. All of these cases died of septicæmia.

Case i. "Fully a quart of reddish serum escaped from the pelvis and abdominal cavities during the necropsy."

Case ii. Died three days after wound. "Three pints of red serum in peritoneal cavity."

Cases iii and iv were seen in Confederate soldiers. Both had large quantities of red serum in the peritoneal cavity.

In these, death resulted precisely as it would have done if the peritoneal cavity had been penetrated, and the omentum or intestine wounded. These help to prove that all wounds of the peritoneum have a common termination in death by septicæmia, and not by peritonitis. Where the outer surface of the peritoneum was merely bruised by the transit of the missile, we might have expected recovery without special symptoms; or if inflammatory action supervened, we would have reasonably expected its propagation to the inner surface of the peritoneum, producing legitimate peritonitis; but, in Dr. Hunter McGuire's cases, no such thing was found. When the injured peritoneum took on action necessary to throw off bloody serum along the track of the ball, this same action on the inner surface of the peritoneum resulted in the exudation of bloody serum into the peritoneal cavity. Here, then, is a problem for pathologists. The idea prevails that bloody serum in the peritoneal cavity is aseptic and harmless, when there is no vent by which air can reach it. In the above cases, the intestine was not opened, and its contents could not mingle with the bloody serum; nor was the peritoneum penetrated, and hence no air could enter by the track of the ball. Why, then, should the bloody serum in these four cases have produced death in two and three days, quite as rapidly as if the peritoneal cavity had been penetrated, with injury to intestine? Is it by the physiological law of osmosis, by which gases and germ-bearing contents of the intestinal canal are brought into contact with the reddish serum in the peritoneal cavity? It is not my province to solve this question. I accept the facts, and report them as they were observed by one of the ablest and most accomplished surgeons in our country.

Judging from my experience in ovariotomy, from my observations at Sedan, from the cases of Richardson and Fisk, and from the reports of Dr. Hunter McGuire's cases, the inference is clear that septicæmia from bloody serum in the peritoneal cavity is the usual cause of death after gunshot or other wounds of the peritoneum, and its contained organs. Of course, I speak of cases that survive shock and hæmorrhage. Shock and hæmorrhage are co-workers. Strong men seldom die of uncomplicated shock, especially from shot wounds in any part of the body; but, of course, they die very speedily of internal hæmorrhage if large blood vessels be wounded, and more slowly if smaller vessels are injured.

We all remember the melancholy death of the distinguished jurist and statesman, Vallandigham of Ohio, in 1873. He was addressing a jury on a criminal case, and, with pistol in hand, he was demonstrating how a man might accidentally shoot himself in the abdomen; and, when he pointed the weapon (which was unfortunately loaded) toward his own abdomen, it went off, and the ball perforated the peritoneal cavity. He fell to the floor, and died in twelve hours, without reaction, for he died of internal hæmorrhage. If the abdomen had been promptly opened, the bleeding vessels could have been secured, and a valuable life saved.

Do men ever recover spontaneously from gunshot-wounds of the abdomen perforating the peritoneal cavity? Rarely indeed, if the bowel be wounded above the brim of the pelvis.

At Sedan, we had seven cases of shot-wounds of the abdomen, and they all died, most of them within twenty-four hours. I made *post mortem* examinations in several of these, and in all found large quantities of reddish serum in the pelvic peritoneal cavity; and, in all, death was evidently the result of septicæmia caused by this reddish serum, There were several cases of recovery, where balls passed through the pelvis, wounding the bladder or bowel, or both; but no recovery where the wound was above the brim of the pelvis.

We had three cases of pelvic shot-wounds that recovered in the Anglo-American Ambulance at Sedan. In one case, "the ball entered on the left side of the coccyx, traversed the rectum and bladder, and emerged just above the symphysis pubis. For a considerable time, all the fæces passed by the posterior opening. while the urine flowed entirely by the anterior wound. He recovered without one single unfavorable symptom. Both wounds had closed by the 18th September (seventeen days after the battle), and remained so till his discharge from hospital on September 28th, when he appeared as well as if nothing had happed to him" (*Notes and Recollections of an Ambulance Surgeon, etc.*, by William Mac Cormac, pp. 73, 74. 1871.) Sir W. Mac Cormac saw three other cases of pelvic gunshot-wound involving the bladder recover without accident, two in a Belgian ambulanee, and the third under Dr. Junker's care at the Chateau de Bazielles. Sir W. Mac Cormac further says, "There were some other cases of similar injury which I did not see, but which, I was informed, were doing well." Four days after the battle of Sedan, I went to Mézières for supplies for the wounded soldiers. Travelling under the banner of the red cross, we were hailed at almost every hamlet, and asked to visit sick and wounded. Amongst the great number demanding our care, my son, Dr. Harry Marion Sims, called my attention to a young German who was shot through the pelvis. The ball entered about two inches above Poupart's ligament, and midway between the linea alba and the crest of the ilium on the left side, and passed directly back through the pelvis, wounding the sigmoid flexure. Fæces passed freely by both openings, but, of course, more freely by the posterior, as he lay mostly on his back. His pulse was but 78, and there was no pain of tension in any part of the abdomen: and he had every appearace of a rapid recovery. He was among French wounded, could speak only his own language, and his greatest suffering was from nostalgia. When my son spoke to him in German, and gave him every assurance of a speedy cure, and of early removal to a German ambulance, it raised his drooping spirits, and I have no doubt that he eventually recovered. He was shot through and through the pelvic peritoneal cavity, perforating the bowel, and yet there was not the least constitutional disturbance, nor the first symptom of peritonitis. This was four days after the wounding.

Thus, at our Sedan ambulanee, we had three cases shot directly through the pelvis; one at the ambulance at Bazielles, one on the road to Mézières, and two at Belgian ambulance; seven in all. Thus, seven shot through the pelvis all recovered, and seven shot through the abdomen all died in about twenty-four hours.

Professor Montrose A. Pallen, who had a large experience in the Confederate Army, saw a case recover, where the ball passed through the bladder and out through the left ilium; and Professor von Nussbaum says, "I have seen cases get well in which the bladder and rectum were shot through and through, the ball making not only an inlet, but an outlet as well."*

Major Gardner, surgeon, United States Army, has given me the histories of four cases of recovery from shot-wounds of the pelvis, two during the war, and two since.

1. General X. Ball shattered radius of right arm, entered abdomen, right side, three inches above Poupart's ligament, perforated colon, and passed out at right sacro-iliac junction; radius right arm resected; fæces passed by both entrance and exit openings. Returned to duty in three months, wearing pad on posterior fistulous track, through which fæcal matter passed in small quantities. This healed soon after, and the General lived many years in perfect health.

2. Ball passed tranversely through both ilia, wounding bladder; wore a catheter. Three weeks after, there was urinous odor at the exit in left hip. Patient soon got well.

Two others, with similar pelvic wounds of bowel, recovered speedily. In all these cases, shock was less than when balls perforate the abdominal cavity. In one case, there was perfect reaction in four hours.

Dr. Thomas J. Murdoch of Baltimore gives me the history of a man wounded at Gettysburg, The ball passed antero-posteriorly through the bladder and bowel. He frequently passed fæces through the urethra as well as by posterior opening. In seven weeks, he left hospital well, and returned to duty,

Now let us sum up these pelvic gunshot-wounds, which have occurred under the observation of my personal friends: at Sedan, seven; Dr. Pallen, one: Dr. Gardner, four; Dr. Murdoch, one; total, thirteen.

From my Sedan experience, it would seem to be an exception for a man to recover if shot through the abdomen; and it appears to be exeeptional for a man to die when shot through the pelvis. Why do men recover from gunshot-wounds perforating the bladder, bowel, and peritoneum in the pelvic cavity, and not from gunshot-wounds perforating the intestine and peritoneum in the abdominal cavity? The explanation is very simple. In the first case, there is natural drainage of septic matter directly from the pelvic cavity along the track of the ball, and the patient lives. In the other case, drainage is impossible, because the septic matter falls into the pelvic cavity, is there retained, and then absorbed, and the patient dies of blood-poisoning.—*Brit. Med. Jour.*

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* *On Drainage of the Peritoneal Cavity and Intraperitoneal Injections.* A contribution to the Treatment of Wounds of the Peritoneum, and Ovariotomy, by Professor von Nussbaum, staff-surgeon, etc., 1873.

NOTE ON CLINICAL THERMOMETERS.

By E. R. SQUIBB, M. D., N. Y

Thermometers in general should be, to a moderate degrees at least, instruments of precision, but that they are not so is becoming pretty generally known. Clinical thermometers are perhaps quite as untrustworthy as any, while from their short range their errors are more difficult to detect, and from their important uses these errors become serious defects. A good thermometer is a very valuable instrument, and is rather rare among the many thousands which are annually sold, but a poor one, like a false weight, is an abomination and a fraud, and, unfortunately, the appearance of the instrument is no indication of its true value because the skill which finishes them well is of a kind very much cheaper and easier to get than that which adjusts their accuracy. Thousands of very good-looking clinical thermometers are annually sold by the makers at one dollar to one dollar and a half each ; but he who considers the care, skill, time and labor necessary to the principles involved in a fairly good thermometer, and who yet buys one of these, is simply buying his own folly and short-sightedness and cheats himself quite as much as he is cheated by the seller.

It would, however, be almost equally a mistake to buy clinical thermometers made with the skill and care requisite to make accurate standard thermometers, because the sphere of error in the application and uses of clinical thermometers is so much greater than in the use of very fine instruments that it would be like paying for an assay balance on which to weigh flour or sugar. The aim should be to get an instrument accurate to within the sphere of other unavoidable errors incident to its uses. Paying for a greater degree of accuracy than this is only so much money wasted. Properly accurate thermometers are always to be had at prices which pretty closely correspond to their true value, but they never can be had at the prices at which the makers are obliged to sell a large proportion of the instruments which are sold and in use, simply because the prices are below the cost of the time, skill and labor essential to the construction of a properly accurate instrument. Prices paid to dealers, however, are not always indications of either true value or of the prices realized by makers. A thermometer good-looking enough to be bought cheaply and sold dearly is the primary object of many dealers. It becomes very necessary to know how to select a good thermometer independently of its appearance and price, and to aid in such knowledge is the object of this note.

Beside the errors which arise from imperfect tubes, a low degree of skill, and the use of incorrect standards in making thermometers, there is one very important source of large error that is not so generally known, namely, the contraction of the glass of which the bulb is made.

It was long ago shown that glass undergoes a process of contraction after having been melted, which, from being comparatively rapid at first, becomes slower and slower during many years; and that glasses of different composition undergo different degrees of contraction, and at different rates. Regnault's observations (given from memory) showed that the contraction noticeable by very careful experiments continued for six years or more, but that after the first three or four years it was very slight, and very slow, hardly appreciable to the finest measurements, and therefore not at all important to any but the very finest standard instruments.

It was also shown that if during the course of this contraction, or at any time after it had been completed, the glass was re-heated, even to a moderate degree, and far short of melting, it again expanded to an extent proportionate to the heating; but that after re-heating it contracted much more rapidly than at first, and so regained the degree of contraction which might have required two years to attain, within a few months.

From these facts it follows that a thermometer which is graduated as soon as it is made, though made with proper care and skill, and graduated correctly from a good standard, will have its mercury column pushed up so that the readings from it will all be too high, and this error will increase through many years. This contraction, however, becomes so slight and so slow that after three years, perhaps, it could not be detected in any ordinary thermometer by any ordinary means of observation. And farther, it may be stated as being probable that during the last six months of the three years the contraction in any ordinary thermometer glass would not exceed two-tenths of a degree. Then, as this two-tenths of a degree is within the sphere of other common errors of construction and uses of clinical thermometers, it might be disregarded in view of the additional cost of eliminating this with the other equally small errors of construction and application.

Hence clinical thermometers should always be "seasoned." That is, after being made so far as heating processes are necessary, they should be put away for three years, or at least for two years and a half, before they are graduated, because after three years, no change of practical importance will occur.

It is probably only the makers of cheap instruments who graduate them as soon as made, and such thermometers being untrustworthy from other causes, are most so from this cause also. It may perhaps be stated, though rather at random, as they do not tell the details of their business, that makers who have moderate reputations to keep up, do not as a rule graduate their tubes until they have been seasoned for a year or a year and a half. But as only about one-half of the total contraction will have occurred in a year and a half, such thermometers in three years will be found to read about five-tenths of a degree too high. Hence it occurs that from this contraction alone thermometers which have remained unsold in the hands of dealers, or have remained unbroken in the hands of physicians for two years or more, are often half a degree out of the way, and always too high, while in cheap thermometers it is not uncommon to find them a degree or more out of the way.

A majority of observers will be well served if they get thermometers which are accurate to within two-tenths of a degree. But fairly close observers should not be satisfied with an error of more than one-tenth, unless the error be accurately known, and be applied as a correction to each observation made with the instrument. Of course an otherwise well-made instrument which is old enough to have reached its maximum contraction, or say over three years old, if its error be accurately known, and always applied, is as good as if it had no error, and the common practice of all close observers should be to get an instrument of known age and error, and keep it carefully, not for daily use, but to compare other thermometers by, and then buy cheaper thermometers for daily use and accidental breakage. Every clinical thermometer bought by a physician should be accompanied by a certificate stating when and where it was compared. For many years, and until 1880. the only thermometers having these certificates were compared at the Royal Observatory at Kew Gardens, London, and the certificates of comparison with their standards were supplied by the Kew Observatory at a shilling each. These certificates gave a very great advantage to the English clinical thermometers with which they were sold; but the great demand for these thermometers caused the English makers to send them out unseasoned, though certified, and thus the certificate lost much of its utility, and often accidentally came to be misleading. About 1880, however, the Winchester Observatory of Yale College, at New Haven, Conn., established a thermometric bureau, and placed it under Dr. Leonard Waldo, the astronomer in charge, and now this bureau takes the place, for this country, of the Kew Observatory in England. Any physician can now send his thermometer to the Yale College Observatory and for fifty cents obtain an accurate certificate of its error throughout the scale; and should his thermometer be old enough when sent, the certificate will be good for the entire lifetime of the instrument. It should be a source of great satisfaction to all who use thermometers for any purpose that this well-known Observatory has assumed this important work, and now it will be the fault of observers if they have not corrected instruments. If the results realized in Great Britain from the Kew Observatory should be attained here from the Yale Observatory, it will not be many years before the grossly inaccurate instruments scattered all over this country, for meteorological as well as for medical uses, will be very much diminished in number. At least, if they are not, it will be the blamable fault of the observers who use them. The Yale Observatory also undertakes for a very small consideration, to seal up packages of thermometers for makers, so that it may issue with them certificates of the age or seasoning of each thermometer.

In selecting a clinical thermometer several important points are entirely within reach of the physician who selects.

First, the index or register being shaken well down, the bulb is taken between the thumb and finger, and the ascending column of mercury carefully observed. If it rises very slowly the glass of the bulb is too thick, or the tube too large. If it rises very rapidly indeed, the glass of the bulb is too thin and the thermometer will be easily broken. This defect from thinness of glass is, however, comparatively rare, while those in which it is too thick are very common.

When an instrument is found which does not rise very slowly, let it be cleansed, and then placed under the tongue, for eight or nine minutes by the watch. Then let the temperature be read, and the bulb at once returned to its position under the tongue for ten minutes more and again read. If the temperature has increased since the first reading, the instrument should be rejected, because a thermometer which does not reach its maximum indication in nine minutes is unfit for clinical uses. It will tire out the patient, and use up a great deal of the physician's time unnecessarily. If the reading has not increased, allow it to cool for ten minutes and again place the bulb under the tongue for six minutes and again read. If now the reading is lower than it was before, then the time required to reach its maximum indication is longer than six minutes but shorter than nine, and it must be again cooled, and again placed under the tongue for seven or for eight minutes according to the difference between the former readings; and in this way a fourth or a fifth trial will determine the point of maximum indication. But if the six minutes reading corresponds within one-tenth of a degree with the nine minutes reading, then it is to be again cooled and placed under the tongue for four minutes, and so on until the time for reaching its maximum indication is established. Then in all his observations throughout the lifetime of this instrument the physician must always keep it in place for this length of time in order to get a trustworthy observation. The average of good thermometers may be given as from six to eight minutes. Those of three, four and five minutes are exceptional and rare, and are very valuable when found, if well taken care of, for they save a great deal of time. But while an eight minute thermometer may fall on the carpet either in or out of its case and only exceptionally be broken, a similar accident will be almost surely fatal to one of four minutes.

The next point in the selection is to see that the register shakes down easy enough without moving too easily. This will depend a good deal upon the method used by each individual. If the method used by thermometer makers be used, it will with much ease get any register down, and that without much risk of losing it, but some skill and practice is needed in acquiring this method, and it is not susceptible of being clearly explained. They hold the thermometer rather loosely by the extreme upper end and then give it a quick flirt or sling outward from them somewhat as if cracking a whip, the arm representing the whip-handle and the thermometer the whip-lash. The methods in almost universal use are all much inferior to this, and are too well known to need description, and the observer must select his instrument to accord with his own method if he does not choose to acquire a better one. If the register moves down too easily it will in all thermometers, except one variety, be liable at any time to be lost by causing it to coalesce with the body of mercury below it; and if lost, the thermometer, as a rule, is hopelessly spoiled. The register should be separated from the mercurial column below it by a distance almost inappreciable to the naked eye when the instrument is at the lower end of its scale. The thermometer with "indestructible index" is made on the principle of Phillips' maximum thermometer, namely, by a narrow contraction near the bulb. But in this case the contraction must be so much narrower than in the Phillips instrument that the mercury passes through it by jumps, and of course the whole column rises by jumps so that it does not indicate with accuracy to tenths of a Fahrenheit degree. These thermometers differ somewhat in the lengh of their jumps, and probably the makers will improve upom them in future, but at present they are not adapted to very close observations, though perhaps accurate enough for ordinary indiscriminate use. It may be safely said, however, in regard to the ordinary clinical thermometer that a register is never lost except by mismanagement, and such mismanagement is much more frequent with thermometers which shake down easily. To this it may be added that physicians, as a rule, are dissatisfied with instruments which do not shake down easily, and this is the reason for so many lost registers. Registers are often, if not generally, lost at the first or second shaking down, by supposing they are hard to shake down when they are not, or by using some bad method of shaking. Hence a new thermometer should be shaken down with great care until the observer knows how much force is required.

Almost all clinical thermometers are graduated to fifths of a degree, but are easily read to tenths, the only difficulty being with the shorter ones, where the marks for fifths are so close that the distortion by thickness of glass on the stem makes it difficult to hold the instrument exactly at a right angle with the line of accurate vision. Any one of these short thermometers can be easily read one or two-tenths out ot the way on either side of its true indication by this distortion of the glass, and by holding the thermometer badly. A great improvement has been made of late years by Hicks, of London, for reading these short thermometers, or indeed for the reading of any clinical thermometer. Hicks holds a patent for making the stem of such a form that he gets the magnifying effect of a lens upon the column of mercury when the instrument is properly held. Such instruments he calls "Lens-front Thermometers." In selecting one of these, care is necessary to see that the line of graduation is so placed as to be well seen by the magnifying front. In some of Hicks' instruments when the column is brought under the graduations it is only seen edgewise, and without being magnified. For the reading that is necessary to very careful and clear observations a five-inch or a six-inch clinical thermometer is much the best length, because it gives a much more open graduation. But four-inch is the length generally preferred, because better adapted to the pocket. Thus, probably, nine-tenths of all that are sold are four-inch. A three-inch instrument is made by some makers, but the graduation is too close to be read with a useful degree of accuracy even if a glass be used in the reading.

Finally, in selecting, the bulb should be slowly and carefully warmed by holding it near some source of heat until the mercury has slowly risen to within one or two degrees' length of the top of the capillary tube, the highest point reached being carefully noticed. If the tube above the mercury contains much air the register will be pushed down by it as the instrument cools. Such an instrument is not trustworthy. As a rule a clinical thermometer should not be bought without a certificate of either Yale or Kew Observatories, and care should be taken that the number of the certificate has not been altered, and that it agrees with the number of the thermometer with which it is sold. If the date of the certificate be more than six months past, it, with the thermometer should be sent to the Yale Observatory for a new verification, because the thermometer may have been newly made when the certificate was issued, and if so, with some varieties of glass in use, it may be a degree or more out of the way in six months. An excellent practice for any physician is to buy a good thermometer with a certificate of as old a date as he can get, and put it away for a period of three years from the date of the certificate. Then send it to Yale for a new certificate, keeping it afterwards as a standard by which to ascertain the errors of those which must be bought from time to time as they are broken in use. Such a thermometer is very valuable, and may do excellent duty among neighboring physicians. One of the very prominent uses of these certificates is to indicate the "calibration" of the mercury tube. If this tube be wider at some places than at others, as is commonly the case, the error of the thermometer will vary at different parts of the reading scale, because the scale is mathematically divided. These variations appear on the certificate for each five degrees, and it commonly occurs that there is a difference of one or two-tenths in each five degrees, since a practically uniform tube is rather rare even for so short a range. As these errors in tube-diameter do not change, successive certificates for the same instrument should always show the same variations. Hence it is that any one who has an old instrument with a certificate can easily compare any other instrument having a certificate, and correct all its errors by a single observation at any part of the scale. The two instruments are cleansed and the bulbs are together placed under the tongue for the maximum time of the slowest instrument, and they are then carefully read. Now, for example, if the reading of the standard instrument should be 99.1° and its error at 100° by its certificate should be "—·6°", then the true temperature would be (99.1—·6=) 98.5. Then suppose the one to be compared with the standard read 99.3° and its error at 100° by its certificate was "—·3°," its reading if corrected by its own certificate would be (99.3—·3=) 99°, but corrected by the standard it should be 98.5° and is therefore ·5° too high by its certificate, and ·8° too high by the standard. This would show that it had risen ·5° since the date of its certificate, and that to correct its readings now ·5° must be added to each of the errors of its certificate. That is, its true reading will be at each point its former certificate error plus its new eerror. If its certificate read as follows:

"At 95° . . —·2°" —·2+—·5= —·7°
" 100° . . —·3°" —·3+—·5= —·8°
" 105° . . —·2°" —·2+—·5= —·7°
" 110° . . —·1°" —·1+—·5= —·6°

Then its correction by the present comparison with the standard would be as indicated by the figures at the right of the older corrections. This simply expresses the fact that there was a narrow place in the mercury tube somewhere about the 100° graduation, and that in consequence of this the readings, to be true, must be corrected in this way. It must be noticed that in these certificates the minus sign "—" placed before the error does not mean that the thermometer reads too low, as many physicians suppose, but, on the contrary, that it reads too high, and the error must be subtracted in order to get the true reading. This is clearly explained on each certificate, yet it does not seem to be understood. It would have been better, perhaps, had the signs been avoided and the words "too high" or "too low" used instead, for then there could have been no misapprehension, nor any explanation needed. It is possible that Yale may be induced to make this improvement over Kew, for certainly Yale usage should be very soon the rule for this country. And it may be hoped, too, that Yale will make another step in advance of Kew by putting upon each certificate the time required for each certified instrument to obtain its maximum indication when placed under the tongue. This, however, takes a good deal of time, and is of less importance, because each physician can do it for himself if he chooses, and he cannot use his instrument intelligently without knowing the time it requires. It is, however, very certain that a very large number of observations are valueless in consequence of insufficient time being allowed for the instruments to reach their highest point.

In the application of the clinical thermometer, if the physician has a safe slow instrument and wants to save time, he has only to call for a glass of tepid water, and, having assured himself that it is not above blood heat, to stir the thermometer and lower part of the stem round in the water for half a minute to one minute, and when he sees that it has nearly reached the normal temperature transfer it quickly from the water to the patient's mouth. A thermometer which requires eight minutes to reach its maximum indication under the tongue will reach the same point in less than half the time in a glass of water of the same temperature as the mouth, because the surface contact is so much more rapidly changed in the case of the water. This use of water has another advantage of so much importance that it should really be uniformly adopted. The cleanliness of it addresses itself at once to the sensibilities of patients, for few patients can help mentally wondering whose mouth that thermometer has been last in. A successful eye-surgeon or a successful dentist always takes care to let his patient see him wash his hands in clean water and dry them on a white napkin taken unfolded from his drawer. Then why should not a physician let his patient see him rinse off his thermometer before and after applying it? There can be no doubt that the anus is slightly the best place for the thermometer in observations of temperature. Yet except in cases of young children, and in very exceptional conditions in adults, the inconveniences far overbalance the slight advantages, and the mouth is now becoming very generally accepted as far the best place. The axilla has one or two disadvantages that are perhaps rarely thought of. In dry and harsh conditions of the cuticle, not rare in persons requiring frequent observations by thermometer, the cuticle becomes so bad a conductor that even by waiting a very long time the thermometer gives an indication much below that of the mouth at the same time. This can be measurably corrected by sponging the axilla out with tepid water, and leaving it moist when the thermometer is placed in it. The other difficulty is that when a thermometer is placed in the axilla, some pressure of the arm is needed to keep it in place, and this pressure diminishes the cutaneous circulation in the parts in contact with the instrument, and this in time lessens the temperature so that the thermometer indication is liable to be too low. In the conditions of enfeebled circulation of low fevers, the errors of observation from this cause are often important. If any one will take the bulb of a sensitive good thermometer between the moistened surfaces of his finger and thumb and compress it pretty firmly for the time needed to attain its highest indication, and notice carefully what this indication is, he will find it very low, because the pressure has impeded the circulation and kept the blood out of the parts. Let him now slack up the pressure gradually and he will soon see the temperature begin to rise as more blood begins to circulate in the parts, bringing with it the internal temperature. Hence, when all circumstances are fairly considered, the rapidly increasing custom of using the mouth for temperature observations is the best, and whenever it is adopted, then cleanliness, even to great nicety, should be used, and the success which attends the cleanly eye-surgeon or dentist will be sure to follow.—*Ephemeris.*

SCURVY. By FREDERICK SCHWATKA, M. D., Lieutenant U. S. Army.

Upon my first visit, during the winter of 1870–79, to the American whaleships wintering in the ice at Marble Island Harbor, North Hudson's Bay, in order to procure dogs from the Esquimaux for my proposed sledge journey to King William's Land during the summer of 1879, I came in contact with a great deel of scurvy—that bane of the Arctic sailor. Prevailing as it did among the ships, and in the large number of crews, with heterogeneous nationalities and temperaments, and seeing the various methods employed to combat the evil, I gained an insight into the scourge which I could not have had in such a comprehensive manner under any other circumstances. This, combined with my after experience, although of a negative nature—as my party never suffered from the complaint—and the researches of others, offered me a rare opportunity to narrow the disease within more definite limits than now exists, especially in regard to its causation, which has had such a wide field accorded to it in the past by Arctic and other writers.

There is in the animal and vegetable kingdoms a definite but unknown vital property or principle which exists in the living state, and which disappears more or less rapidly after the so-called death of the organism. Death, in a legal or religious sense, is sufficiently established when the visible manifestations of life have ceased and the organism is beyond resuscitation, but any one familiar with even the rudiments of physiology knows that death is a process, a series of steps which no one has yet had the boldness to tell us which is the last, and which is the harder to determine, the lower the form of life. This death is very rapid in the animal, but slower in the vegetable kingdom, and all of the efforts made by man in desiccating, preserving, curing, or otherwise preparing the foods derived from these two kingdoms, seems inadequate to completely retain this mysterious property, so absolutely essential to maintan a healthy state in the omnivorous human. The retention of this principle, whatever it may be, is more easily accomplished with fruits, grains, and vegetables, owing to their slower death, as already noted, than with animal food, and it is therefore to them that we must look for our main supply of those articles of diet which are prepared at home for an Arctic expedition; yet the fact must never be lost sight of that they are, after all, only approximately *fresh* food, and not to be wholly depended upon.

The greater variety of animal life in the frigid zones over the vegetable—the latter having hardly an edible representative in the whole Arctic flora—makes it, after all, the main dependence on which the polar voyager must rely to secure exemption from that disease which must enter into all his calculations. Every exertion should therefore be made to make the procurement of game as certain as possible, by being well provided with the very best of arms and ammunition, and hunting and fishing implements, and above all, with good native hunters, who, from habit and acclimatization, are superior to any others in these bleak frozen localities.

The prime essential causation of scurvy is the *want* of *fresh* meats, fruits and vegetables, to which, in the Arctic regions, are superadded the powerful auxiliaries of damp quarters, exposure, the depressing effect of the long continued polar night, and, in badly conducted expeditions, poor ventilation, uncleanliness, illy cooked food, and lack of sufficient exercise for both body and mind; but none of these auxiliaries, or their combinations, are sufficient within themselves to determine this disease until the vital forces have been lowered by protracted abstinence from *fresh* foods. An ounce of prevention is *not* worth a pound of cure, and in order that a fresh diet should be a perfect prophylactic it is necessary that it should enter somewhere near the proportion it does in home consumption. It must always be borne in mind that fresh food is not a *medicine* to counteract certain pathological conditions; it is an essential vital nourishment, given to combat a systemic debility, whose visible manifestations are called scurvy. The régime, therefore, to be successful, can never be homœopathic. It is the fact that this parsimony of proper food has often been combined with the other depressing influences noticed above, and has led many to give undue value to the latter in the etiology of the complaint, and to produce such a wide and discordant range of opinions on its causation even by those who have met it face to face.

Sir John Ross thought that it was produced by the want of fresh bread, yet my party was without fresh bread for two years, and nearly a year without bread of any kind, which was certainly fair enough test to exclude it from any of the essential causes; still the use of fresh bread as an auxiliary prophylactic can not be too strongly dwelt upon, and no expedition is complete within the powers of man to make it so whose culinary department cannot furnish fresh bread to the exclusion of all other, especially, during these long, weary nights when the disease is most likely to make its invasion. The flour employed upon an Arctic expedition should be recently ground from the very latest crop of wheat or other cereals employed, and be preserved in hermetically sealed tin cases. Sir John believed that his second expedition showed that vegetable nourishment alone was not competent to make headway against it, whereas he only proved that prepared vegetables were so; and when we reflect that from 1829 to 1833 vegetables and fruits were illy prepared compared with the present methods, which are still not invincible, his scurvy can easily be accounted for, especially when we find that an addition of fresh fish or recently killed seals to the ordinary diet of the ship's stores was an effective preservative to the health of the crews.

One of the greatest obstacles to be encountered in the employment of fresh animal food in the polar zones is the antipathy with which such a diet of fish-eating animals is received by the consumers. The flesh of the reindeer is at once acceptable, and that of the musk-ox reasonably so, but the walrus, polar bear, and different varieties of seals have peculiar flavors, which, with some people, it is almost impossible to overcome. The most tenacious epicures are to be found in the forecastle. The educated officer, whose mess table in the past may have been a perfectly animated market report, can, with an honorable incentive ahead of him, more readily relinquish his varied bill of fare than can the foremast hand with his "hard-tack," "salt junk," and bitter coffee to which he is so firmly wedded. There was no necessity for the scurvy on board of Parry's ships when wintering at Igloolik, as that place is notoriously abundant with seal, walrus, polar bear, and fish at all times, and with reindeer and musk-oxen in the summer; and I am not only inclined to second the idea of American whaling masters, that those persons who will take this disease before they will eat bear, seal, or walrus are not only the least useful men of the ship's crews, but to go a step farther, and to say that for an Arctic exploring expedition, where the stomach is called upon to bear its share of the uncomfortable changes and hardships, they are simply worthless. A cook who has had some exexperience in converting these objectionable meats into more or less palatable dishes should form a part of the help in the culinary department.

Sir Edward Parry believed that the principal cause was in the clammy moisture of the ship's quarters, and especially, when the crew were compelled to sleep in damp bedding, yet I found no dampness whatever in most of the whaleships suffering with the disease; and the innumerable cases where large parties of men have been long subjected to this inconvenience without incurring it, makes it a mooted question whether such value can be attributed to it as has been done by such eminent authority as Sir Edward Parry, The dampness in Arctic ships is undoubtedly a powerful ally to the principal cause, and may, no doubt, readily determine the disease when the latter has, so to speak, established the scorbutic diathesis in the system, or seriously compromise its cure. If the winter quarters of the vessel be near the abodes or within reach of the visits of Esquimaux, these adepts in snow architecture can easily "house" the ship so perfectly that dampness may be reduced to an insignificant minimum. Where it is not expected they will be encountered, persons familiar with their methods should form part of the crew, as Arctic whalemen, etc. During Sir Edward Parry's wintering at Melville Island he found freshly gathered sorrel an effective remedy, despite the dampness of his ships; but this plant, unfortunately, is not to be found in all Arctic localities, and most expeditions to these parts, being compelled to prosecute their labors on shipboard during the short summer months, have but little chance to gather the few simple herbs that are then in the prime of their short existence.

Captain McClure's expedition, which spent its third winter in Bay of Mercy, Banks' Land, and which, despite the fact that all hands were fed on fresh (?) meat three times a week, suffered somewhat from the malady, is often cited as an instance (and I believe is the only Arctic instance) to illustrate the fact that such a diet is not in itself adequate to stay the progress of the complaint. But if we take all the game secured by that expedition and mathematically divide or distribue it among the large crew during their three years' Arctic sojourn, the amount becomes so very small that one is forced to admire Sir Robert McClure more for his admirable good sense, tact, and judgment in conducting his crew so safely through under such discouraging circumstances, than for the conclusions he reached in dealing with the few cases he encountered. It should also be remembered that the reindeer, his main supply of fresh food, migrates southward from Banks' Land as early as the latter part of September, and cross Dease's Strait to the North American mainland as soon as that channel freezes over in early October, and remain absent until May or June. His winter's supply of reindeer meat could, therefore, hardly be called fresh, for even if preserved by freezing, it will lose much of its value. Payer, of the Austro-Hungarian expedition, an equally careful observer, has said, "We spent the latter half of August in seal hunting, for it was only by the use of fresh meat that we were able to contend with, if not prevent, cases of scurvy." I shall again refer to the meat diet question under another head.

There is also a prevailing idea that the constitution of a white man steadily deteriorates in this enervating climate, and each recurring winter finds him less able to combat the scurvy and other Arctic debilitating diseases, until it is a mere matter of time when the strongest and healthiest of them must succumb. This is true just so far as drafts of vitality are made upon the healthy organism to support it, instead of doing so by proper fresh food, and this evil, like any other, can become accumulative until it will undermine, in a definite period of time, even the hardiest constitutions. I do not hesitate to state that, with an ample supply of fresh palatable food, the Arctic regions are the healthiest of all zones to these white men who are of sufficient health, strength, and endurance to be enlisted for a polar expedition, and this for an indefinite period of time. This statement is conclusively proven by many typical cases.

Among the earlier navigators, provided with only the coarsest salt provisions and no method of transporting fresh food, it was found impossible to go into polar winter quarters without the direst results, and expeditions were only fitted for a summer's cruise. The many unfortunate terminations to these winter experiments were then universally attributed to the salt provisions with which they were provided, a theory which is yet zealously maintained by some. Salted provisions are deleterious in direct ratio to the amount of fresh food they displace and for which they are unfortunately often substituted, it being nearly always animal food which is thus prepared. Other than this, salted provisions have no influence in the clinical history of the disease. I believe, indeed, that the salted mess pork of the whaleships is equal, if not superior, to the prepared pemmican of Arctic explorers as an Arctic diet, especially if the latter be lacking in fat. Both are worthless if not freely supplemented with the meats obtained in the Polar regions, and the latter is anything but an effective anti-scorbutic. The Russian army at the siege of Azof suffered from scurvy, and yet they had no salt provisions, in fact, they suffered no less severely from a want of this very essential condiment, even attributing the former to a lack of the latter. It sounds strangely incongruous with this theory that eminent practitioners of both continents have often recommended saline medication, especially the salts of potassa, to counteract a deficiency of these constituents from their normal proportions in health, a well-known pathological character in this disease. Dr. Flint, one of the best American authorities says, "that the antiscorbutic virtue of certain vegetables and fruits depends, to a greater or less extent, on the presence of the salts of potassa is altogether probable. Evidence of this is afforded by the fact that the isolated potash salts are useful in preventing the disease." The closely allied chemical and medicinal properties of potassium and sodium and their derived salts makes it highly improbable that the former can have such virtues and the latter such vices in the same pathological conditions. But we have already noticed that Sir John Ross has said (and he is amply corroborated) that a vegetable diet (*i. e.*, Ross' prepared vegetables) is not sufficient to hold the disease in check, and it is not probable that the process of preparation has robbed them of their chemical salts. The true virtues of vegetables are to be found in the freshness of their condition, and the efficacy of saline medication is well shown in the simple laws of assimilation. As the system is lowered the stomach and assimilative powers first reject the most indigestible or the inorganic elements of nutrition. The consequent lack of necessary salts produces the desire for saline foods, as salted provisions, etc., a well-established character of this complaint; but unassimilated, they fail in their object and pass through unchanged with the excreta, until the proper tone of the digestive organs has been raised by a plentiful supply of recently gathered food. The benefits to be derived from the proper use of the often abused salt provisions under the latter circumstances are obvious.

From all these conflicting theories the only harmonious outlet is my previous statement, that it is in some unknown *vital* principle that the antiscorbutic properties of all vegetables reside, a statement which is further supported by the fact that raw and unripe potatoes, cabbage, fruits, and green corn, apples, etc., *i. e.*, when they are at their very maximum of vitality, are known to be more efficacious either as prophylactic or curative agents than at any other time, although at this time they are far less digestible than when ripe.

And this is no less true in the animal class of food. It is often recommended to drink the warm blood of a freshly slaughtered animal, a popular remedy among Arctic whalemen; and no doubt the flesh of it, if partaken of at the same time—a mode I have known to be used myself in one case with surprising effect—would be equally efficacious. Raw meat is assuredly superior to that which has been cooked, and in which it is not unreasonable to infer much of its peculiar vitality has been lost. Of the same kind of animals, the younger and more vigorous are the best, and of different species, those of a more active nature, indicative of greater vitality, are to be preferred. Some Arctic whaling masters believe, not without reason, that seal and walrus are preferable to reindeer, although the latter is more acceptable to the palate; but the reason of this is because the former animals are nearly always killed right at the winter harbor of the ships by hired native hunters, while the reindeer furnished them are generally saddles of those slain in the autumn, during or before their southward migrations, and kept quite a period before being used. Such meats are generally sufficient to prevent the scurvy if amply provided, but if the disease has appeared they are slower in their curative powers than that freshly slain. These facts make McClure's situation, already noticed, more intelligible. The assumption advanced by some, that a too restricted diet of fresh meat has developed the scurvy, received such a negation from the Esquimaux—who are not only essentially carnivorous, but eat their meat mostly in a raw state, and often warm from the freshly slaughtered animal—as to completely settle such a point, and only shows how carelessly causes can be diagnosed by some observers. Fresh, pure air as a causation of consumption is not more absurd. There was more reason displayed in Sir Gilbert Blaine's ideas, that the disease is contagious, which are now only brought forth to be properly ridiculed, inasmuch as it has one property of contagion, slim as it is, and that is the fact of almost simultaneous appearance in a community. Should the Esquimaux, however, be considered so low in the Darwinian scale as to make dietetic analogies unsafe, I might add, that my party of four white men lived on nothing but fresh meat, often raw, for a period of nine months, and were surrounded by all the known auxiliary scorbutic causes besides, and could have only escaped it, in my opinion, by this very diet. I should not have spent even these few words upon this part of the subject, had not this statement, presumably copied from elsewhere, been found under the pen of such authority as Dr. Flint, of New York City. That scorbutic dysentery, a channel that scurvy is prone to follow in warm climates, may be aggravated by the too rapid ingestion of very fresh meat, superadding the *enteric lesions* generally due to such a diet in tropical lands, to a greater extent than the value obtained as an antiscorbutic, is obvious, and this fact would at once indicate the proper treatment under such cirmustances. Such was the case in Lord Anson's famous voyage, when, with a crew suffering from scorbutic dysentery, on the West Coast of Mexico, a palliative treatment by very fresh meat, suddenly assumed, only aggravated the enteric malady with unfavorable reresults,

Scurvy slowly depresses the whole vital powers of man, until at last the ultimate *strain* has been reached in the weakest organ, when it seems to concentrate its powers at this point or points, and owing to the diversity of constitutions, climate, and other causes, this gives a variety to its clinical history which covers almost all the known *ailments* of mankind. It is plainly beyond the scope of this article to designate the various forms it may assume due to these causes. It is often allied with other diseases, which may have been determined by the scorbutic ailment or not, oftener, no doubt, than is generally supposed, but since this is more likely to deceive the practitioner in the torrid or temperate zones than one equally skilful in the Arctic, who is more on the lookout for its invasion, it does not concern us here. A few centuries ago scurvy raged endemically during the winter in cold climates, until civilization furnished better means of preserving vegetables and fresh meats. Then a winter's supply of meat was killed in the autumn and variously prepared, and vegetables at that season were unknown. Now animals are slaughtered to meet the immediate demand, and a plentiful supply of vegetables are carefully housed, or even raised in hot beds, or imported fresh from neighboring climes, and, as a consequence, scurvy has disappeared in civilized and populated districts; war, pestilence, or other great causes unsettle the regular course of events.

The only real antiscorbutic remedies which I am disposed to acknowledge are *fresh* foods and by fresh food I mean *anything* recently deprived of life, or having the powers of preservation of the living principle to an eminent degree, and when I say anything I mean every living organism not actually poisonous, even including such as leaves, *weeds*, *insects*, and reptiles. The first voyagers to Canada prevented and cured the disease by eating the fresh foliage of the spruce pine (*Abies Canadensis*). Captain Cook fared likewise in partaking of the fresh leaves of an evergreen tree in New Zealand ; the sorrel of Parry has already been alluded to ; and the scurvy grass of the Arctic, a rough, tasteless, cruciferous plant of that region is famous for the good it has done. Lord Anson gave a most practical illustration to this theory when he directed a small boat to land on the Island of Juan Fernandez, and procure any thing whatever so that it was green. A boat load of weeds was the result but they did their desired work so well that their efficiency as anti-scorubutics is beyond cavil.

Any process that will destroy vitality itself, as boiling, burning, violent chemical action, etc., will, if used in the preserving of food, do much to destroy its efficiency as an antiscorbutic, therefore we find the most efficient fruits and vegetables to be those simply dried by atmospheric exposure. Dr. J. H. Wilson, of the U. S. Navy, in "Naval Hygiene," says: "It seems to us that various fruits and vegetables, and even flesh, lose less of the peculiar properties which belong to each of them as fresh food by simple dessication than by any other process of preservation yet imagined, not ever excepting the use of air tight cans." Those juices obtained by simple expression, as lime, lemon, and orange juice, carefully bottled from the fresh fruits ; of meats, those dried in the sun and preserved in their own tallow, as the pemmican of the prairie Indian, which bears no more relation to the pemmican prepared for Arctic voyagers by contract, than their scalping does to a shampoo—all of these are known to be better than fruits or vegetables prepared by boiling, or better than chemically prepared tartaric, malic, citric, acetic, or other vegetable acids derived therefrom, or meats that have been boiled and canned, or salted and smoked, although, so far as chemistry can determine, their essential ingredients remained unchanged.

Freezing completely "kills" the antiscorbutic properties of lime, lemon, and other fresh juices, and they lose much of their value by age. Fruits and vegetables whose strong vitality is not destroyed by the preservative propertives of weak acids are very good, in fact, in direct ratio to the amount of freshness thus preserved, as green cucumbers, onions, etc., in vinegar prepared from fresh fruits. Cranberries, despite their high price, must enter more largely into Arctic foods hereafter from their splendid property of long preservation in the weakest of all known acids, pure water. Their strong vitality, thus indicated would show them to be good if properly dried, if that step ever comes to pass.

Those articles of food which consist of the seeds of plants are valuable, as beans, peas, wheat, corn, etc., taken whole, as the preliminary soaking which almost classifies them as freshly grown. This property of sprouting is partially lost with age, although wheat taken from the mummies of Egypt, and older than decipherate history, will germinate if placed under favorable circumstances.

Vinegar, so variously lauded and condemned, is valuable if prepared from fresh fruits, as cider vinegar, etc., but prepared from malt or liquors, or worse than all prepared chemically, it is more or less worthless.

Molasses has also various qualities dependent upon the amount of vitality of the cane that is destroyed in its preparation, as will be readily infered from the following extract from Surgeon Wilson, U.S.N.: "The best is a syrup made by merely evaporating the juice of the cane to a proper consistence ; the next best is the first drainage from the crystalization of brown sugar; the worst in this respect is sugar house syrup, however excellent it may be in other respects."

As scurvy is assumed by us to be the product of a want of food containing its necessary alimentary stimulus of vitality, the most natural conclusion would be that this disease would be sooner developed in those who had already made excessive drains upon their vital powers, as by long continued debaucheries, injurious medication, excessive venery, chronic maladies or other debilitating causes, a conclusion which we find thoroughly supported by unfortunate facts. The expression *vitality*, which has been so often used, while, according to some, not scientifically exact, is yet sufficiently descriptive to the intelligent reader to convey the impression desired.

Condensing this whole article into a nutshell, scurvy has but one prime essential causation, and but one specific cure, the want on one hand and ample supply on the other of fresh vitalizing nourishment, and any considerable deviation from these simple facts will lead one into an intracacy of clinical histories, pathological characteristics, irrelevant diagnostics, and, worse than all, empirical therapeutics, that can only be encompassed by the medical libraries of the world.—*N. Y. Record.*

NOTES ON THE ANTISEPTIC METHODS EMPLOYED IN THE SURGICAL PRACTICE OF THE BASE AND FIELD HOSPITALS: EGYPTIAN CAMPAIGN. By EDGAR M. CROOKSHANK, M. R. C. S., House Surgeon of Kings College Hospital, and attached for duty to the Base and Field Hospitals, Army Medical Department. (*Brit. Med. Jour.*)

Various antiseptic methods have been employed by the surgeons of the Army Medical Department in the treatment of the wounded during the Egyptian campaign; it may be of interest to many to read the mode of application and the results which I had the good fortune to observe.

Treatment of First Wounded at Base Hospital, Ismailia.—The wounded sent down from the front after the first engagements had been, and were, treated at the base hospital, Ismailia, mostly with dressing of carbolic oil, some with the carbolic or the chlorinated soda lotion. In these cases it was found that if not dressed for forty-eight, or even twenty-four hours, the wounds were septic and the dressings odorous, and unless the the latter had been covered with gutta percha tissue, in this climate not only the lotion, but the oil, evaporated, and with the dried coagulated blood and discharge became glued to the wound, so as even after sponging or soaking in water, to be in most cases with difficulty removed, and the cause of discomfort and pain to the patient.

Treatment of the wounded at and after the Battle of Tel-el-Kebir. The wounded brought from the field to the advanced field hospital after the battle of Tel-el-Kebir were dressed with iodoform and boracic acid dressing in the following manner. The wound and skin around were purified by washing with a strong watery solution of carbolic acid (1 in 20), and the surface of the wound sprinkled lightly with the powder of iodoform ; a piece of protective dipped in carbolic, in the absence of boracic lotion was next applied to the wound just sufficient to cover it, and over this a couple of layers of boracic lint, fixed by means of a gauze bandage, the latter, from its lightness, being preferable in this climate to the ordinary linen bandages. Of these cases, some in which the discharge was profuse, were dressed again the next day Kassassin, and others were not seen again until they arrived at the base hospital at Ismailia. Of the latter, the following day those in which the discharge had not appeared on the surface of the dressing, and the patient expressed himself as comfortable, remained untouched ; so that there were cases not redressed until two or even three days after the reception of the wound. In these cases just as in those dressed the day after the engagement, the dressing was perfectly sweet and the wound healthy; and last but not least the dressing was removed with facility, and the patient prevented thereby from suffering either discomfort or pain—the latter, of course, being due to the action of the protective, which, while enabling the discharge to run from beneath it and permeate the boracic lint, at the same time prevents the latter from adhering to the wound. Some of these cases more particularly the severe ones—e. g., shell wounds—remained in the hospital some days before being transferred to ships for England, and during this time their progress was carefully watched, and in all cases the same condition remained of a healthy inodorous wound, and consequently the iodoform and boracic acid met with such approval on the part of the surgeons that all the wounded who have passed through the base hospital, and those already in it since the action at Tel-el-Kebir, have, with a few exceptions, been dressed at one time or another in the manner described. Of the cases already in the hospital two may be cited as examples—one, a sailor with compound fracture of the femur, the other a private with an extensive shell wound perforating and lacerating the calf of the leg. In both these cases the wound had been dressed with the chlorinated soda lotion ; nevertheless the discharge was offensive, and the wound, especially in the second case, presented a sloughing and general unhealthy appearance. The application of iodoform and boracic dressing acted with marvellous rapidity, the fetor being corrected, the sloughs separating and the wounds presenting healthy granulating surfaces. In the case of the compound fracture the wound, after a second application, was not dressed again for five days, when the patient was ordered on board the *Lusitania*, and before leaving the splints and dressing were readjusted. The wound in this case had remained perfectly sweet, and, doubtless, would have continued so if left untouched for a week, the time recommended by Professor Lister when a similar dressing has been applied after the performance of skin-grafting on a large sore,

Antiseptics after Operations. — After the extraction of a bullet, swabbing the cavity of the wound with a solution of chloride of zinc (forty grains to one ounce of water), rendering the wound antiseptic, and the introduction of a drainage tube giving free exit to discharge, and encouraging the wound to fill up by granulation, gave excellent results ; and a similar treatment was equally serviceable in gunshot wounds with a sloughing track and a tendency to the pocketing of discharge. After amputations, also, the forty grain solution of chloride of zinc proved invaluable for swabbing the flaps, not only as a powerful antiseptic, but as a styptic also, stopping all oozing and hæmorrhage from small vessels. Arteries requiring ligation were secured by means of the sulphurous or green catgut introduced by Professor Lister, and used in this campaign for the first time in military surgery. This form posseses all the advantages of the carbolic gut over silk, and over the former of greater strength decreased rate of absorption, and from a point of view of transport in small amount of space occupied in packing, compared with the cumbrous bottles of the carbolized gut.

In the wards a lotion, consisting of one part of the forty-grain solution of chloride of zinc with three parts of 1 in 20 carbolic, proved of great value in encouraging the separation of sloughs and rendering the wound antiseptic. This was especially brought to notice in the case of a Lifeguardsman whose arm had been amputated at the shoulder-joint for a severe gunshot wound. Extensive sloughing occurred within the flaps and pocketing of pus. The removal of a couple of stitches, the introduction of a large size drainage tube and syringing out the wound thoroughly with the lotion mentioned brought away the sloughs, gave free exit to the retained pus, and produced a marked change in the appearance of the wound and general condition of the patient, that from that time the balance was turned in favor of recovery. For correcting the fetor of wounds, iodoform shaken up with 1 and 20 carbolic and syringed into the interior of the wound, also proved useful in the wards. Finally, a case of amputation of the arm by the circular method, performed at the Base Hospital, Ismailia, with Listerian precautions, tended to prove that Listerism could be carried out with equally good results in military as in civil hospital practice. It may be added as a point of interest that in spite of the iodoform having been used in some cases over large wounds more freely than was recommemded, with the exception of one or two cases of headache and general malaise which may have been due to other causes, there were at any rate no marked symptoms of iodoform poisoning, which has been commented upon so much of late and considered a drawback to its use. These slight symptoms, if due at all to the iodoform, only serve to emphasize the necessity of following Professor Lister's instructions of lightly dusting and not thickly covering a wound with the powder.

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ABSTRACTS.

"Qui e nuce nucleum esse vult, frangit nucem."

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ELECTRICITY AS A PROVOCATIVE OF UTERINE CONTRACTIONS. By DR. PAUL HELOT. From the *Annales De Gynécologie*, November. (Translated by J. G. KIERNAN, M. D., Chicago, Ill.)

In the beginning of the century Berthelon and G. Herder employed electricity to provoke or augment uterine contractions. Since this time, Schroeder, Jacoby, Radford, Wilson, Mackensie, Dempsey, Barnes and others have made use of continuous currents in obstetrics.

In France in latter days there has been found no advocate of electricity in obstetrics except Dr. St. Germain although in England there are many obstetricians who prefer this agent to ergot.

Dempsey, Benjamin Franck, and Golding Bird cite several cases in which electricity has been of value in provoking premature labor. Julius Althaus, however, thinks that if in obstetrics faradisation is of value as regards post partum hæmorrhage, it is incapable by itself of provoking the action of the uterus although it markedly augments uterine contractions once they have begun.

Dr. Trispiere, of the value of whose opinion there can be no doubt, thinks that faradisation can have a temporary action only, on the gravid uterus, before the commencement of labor. "Having tried to precipitate labor by provoking contractions in a nulliparous female who might be considered as having arrived at term, I can have," he says, "two séances per day, of five minutes each, for five days, without obtaining a persistence or a re-beginning of the contractions I had temporarily obtained." And he adds further on "that if from the statistics be eliminated, such females as have a miscarriage subsequent to a sneezing, we will be led to conclude that if faradisation has none of the poisonous effects of ergot neither is it more capable of provoking abortion or premature confinement."

He shows much skepticism as to the value of faradisation to complete labor, Dr. St. Germains to the contrary notwithstanding. But he has preceded Dr. Apostoli several years in the employment of faradisation after delivery as a hæmostatic, and as a preventive of puerperal infection. He has found that this treatment abridges convalescences and prevents uterine complications.

Latterly, Dr. Apostoli in a communication made to the Academy of Medicine has called attention to the employment of induced currents engendered by a bobbin with a short thick thread and of increasing intensity, after a normal or complicated labor, or after a miscarriage in the hope of aiding, hastening or completing uterine involution, to abridge convalescence and prevent the complications which result from its arrest or length.

That electricity acts on the gravid uterus in provoking contraction ; that it acts on this organ immediately after confinement, no one will think of denying. This, therefore, is not alone what I propose to discuss; but desiring to limit my studies to a few points, I propose to discuss in this memoire only the action of electricity on the non-gravid uterus. Therefore I sum up the proposed discussion into two questions.

Can the non gravid uterus contract under the influence of electricity ?

Which is the best method of securing these contractions ?

Tyler Smith, cited by Onimus and Legros, reports a case in which a uterine polypus, which could not be seized by the operator, was sufficiently forced out of the uterus by contractions produced by electric ty to enable it to be ligated and extirpated.

This is one of the most positive facts of uterine contraction provoked by electricity with which I am acquainted. Unfortunately Dr. Tyler Smith does not indicate whether he used galvanism or faradisation, or whether the result was obtained immediately or after several séances.

For the last decade certain physicians have employed electricity to secure a radical cure of fibrous tumors of the uterus. In America, Cutter, Brown, Kimball, Thomas, and more recently, Everett; in Italy, Cinicelli, and latterly, Drubroni, every one of these physicians have used the electrolytic action of the pile, introducing into the tumor they wish to destroy, one or more needles in the hope of determining an eschar around its point of implantation. This treatment has been already found of value in France by Dr. Henri Marten.*

I hasten to such physicians as have endeavored for therapeutic reasons to produce uterine contractios by electricity.

In a memoire endorsed by the Société de Médecine de Gand, Dr. Tripier† indicated a procedure which, according to him, "always cures engorgement, often cures deviations and flexions, improves if it does not cure them, and finally diminishes the inconveniences resulting from uterine prolapse very considerably."

To obtain these results, Dr. Tripier resorts to a current produced by an operation of induction *a chasiot* similar except in minor details, to that of Siemmens and Halkse, the negative pole being in contact with the uterus, the positive in contact with the hypogastrium, bladder, rectum, etc.

According to circumstances, the author varies the position of the electrodes to obtain vesico rectal faradisation, lumbo-subpulic, cervico-uterine, in engorgement. He practices recto-uterine, abdomino-rectal, vesico-uterine and vesico-abdominal faradisation. Certain cases are then narrated by Dr. Hebort showing the value of faradisation in condition of the kind just mentioned, after which he comes to the following conclusions :

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* Uterine fibro-myomata and their treatment by electricity. *Annales de Gynécologie*, 1879.

† Lesions of the Shape and Situation of the Uterus.

First. The uterus can, under the influence of electric currents, manifest contractions not only when gravid or immediately after delivery, but when empty.

Second. These contractions can be rendered clearly evident in certain special pathological conditions, or where a glairy plug of the neck retains the secretions of the uterus. The contraction in the latter case forces the plug partially out of the cervix to regain its position when the contraction has ceased.

Third. These contractions may be obtained with a faradaic current making a good number of interruptions every second. But that method is painful and should only be used in post-partum hæmorrhage.

Fourth. Galvanisation by interruption of continued currents provoke contractions in the most favorable fashion since they cause little pain, and because to the mechanical effect is added the electrolytic action of the pole rendered inoffensive by the frequent transformation of the chemical action in movement.

Fifth. The maximum useful effect has been produced with a current of twenty-five to thirty millimeters sharply interrupted every second during a brief space of time.

THE INHALATION OF OXYGEN FOR ANEMIA AND DEBILITY (*Jahrbch. f. Kindhlkde.*, XVIII. B., 1 H.).

Since the discovery of this gas by Priestley, many attempts have been made to introduce it in therapeutics. Priestley himself, having experimented with it, remarks: "Who can deny that this gas may become a much sought for article of luxury, though, as yet, only two mice and myself have had the privilege of inhaling it." About 1790, Beddoes founded a pneumatic institute where, with the assistance of James Watt, who managed the apparatus, he treated patients with the inhalations of oxygen. The new method of treatment spread into France and Germany, but, after a few trials, the difficulty of procuring the gas and its high price led to its disuse. After more than half a century, Demarquay and Leconte (1864) reported to the Acadé ie des Sciences experiments in which animals were kept from fifteen to eighteen hours in pure oxygen with only favorable effect. The same authors have shown that man can breathe from twenty to thirty litres of oxygen without the slightest disturbance. A sick man, on the contrary, feels better for it, breathes easier, and has more appetite. It is contraindicated by tendency to hæmorrhage or severe cardiac trouble. Claude Barnard has shown that the blood of animals absorbs more oxygen during fasting than during digestion. Inhalations should, therefore, be given in the forenoon. Following these experiments, the French physicians have used oxygen in a great number of diseases. Hayem deserves the credit of showing its benefit in cases of anæmia and chlorosis. In 1879, he wrote: "In chlorotic children with an excretion of from fifteen to but ten grams of urea a day, by the inhalation of only ten litres of oxygen daily, the amount of urea increased to thirty-five and forty grams. The patients gained such an appetite that the usual rations were not sufficient. The general condition improved and the weight increased. The microscope showed that, though the number of blood-corpuscles was increased, the formation of pathological blood-corpuscles still continued, but, when iron was administered, this also ceased. Iron preparations which, before the use of the oxygen, had no influence or were not well borne, now had their full effect." Like results have been published by others.

It is important, first of all, that the oxygen should be pure. In former times, salivation sometimes occurred from the mercury from which the gas was prepared. Apothecary Limousin (Paris) now furnishes an apparatus by which it is prepared in a way which is free from danger, rapid and cheap. It is made by heat from chlorate of potash and binoxide of manganese, washed in a dilute solution of potash, and stored in a rubber receiver. It should not cloud a solution of nitrate of silver or redden litmus tincture. Limousin's whole apparatus costs only 130 francs. In past times, all sorts of apparatus have been used for the inhalations. Limousin's arrangement is the simplest and best. It is simply a narghilé connected with the rubber reservoir. He usually fills the bottle with aromatic fluid, consisting of tinct. benzoin, bals. Tolu, and rose water, but simple water or any disinfecting solution is just as good. The lungs should be well filled, the gas retained as long as possible, and exhaled by the nostrils. Age, sex and disease determine the amount to be taken at one sitting—ten to thirty litres.

During and after each sitting the following points may be noticed.

1. Inspiration becomes deeper and more frequent. 2. The pulse becomes more frequent except when rapid from nervous causes. 3. The temperature rises $\frac{1}{10}$°. 4. In weak children, over thirty litres causes a sort of drunkenness, which quickly passes off. 5. After a few sittings, the appetite increases, and the patient feels lighter and better after eating. 6. The weight increases. 7. The appearance of the patient improves. 8. The action of the bowels becomes regular. 9. The microscope shows increase of red blood-corpuscles in proportion to the absorbed oxygen. 10. Without exception the proportion of hemoglobin in the corpuscles is increased.

During the last year the author has treated fifty patients, mostly children, and from the results obtained formulates these statements.

THE USE OF RUSSIAN BATHS FOR DIPHTHERITIC CROUP (*Jahrbuch f. Kindhlkde.*, XVII., B., 1 H.)

The use of steam in inhalation, in the room, etc., is not new in the treatment of diphtheritic croup, but there is no record of the use of steam baths, where the steam comes from outside the room, and the temperature is not too much elevated. As much as six years ago the author extemporized Russian baths in his private practice, and got quite favorable results. In 1878, in the New Dresden Children's Hospital, rooms were provided for the purpose.

The cases of diphtheritis which come to a hospital are of the worst kind, and give a large mortality. Out of 179 in this hospital 93, or 51 per cent., have died. Many were brought in simply for tracheotomy, many already asphyxiated. In 72, tracheotomy was done in 57, immediately or on the day of reception; in 7, on the next morning.

One hundred and twenty-nine baths have been given to 43 patients. The bath lasts half an hour. The temperature of the room is from 80° to 100° F. The bath was only used when the symptoms of stenosis were well marked; in most cases, there was membrane in the pharynx and often albuminuria. The diagnosis of false croup was clearly excluded. The result differed according to the period of disease at which the bath was given. As a rule, it did little or no good when the stenosis had already existed one or more days.

The results were also unfavorable in cases where the stenosis recurred after tracheotomy.

The proper time for the use of the steam bath is just at the beginning of the acute narrowing of the air passages. Even here it is necessary to exclude certain cases. Great weakness, a very frequent pulse, a tendency to hæmorrhage, a very high temperature, and severe complications in the lungs are all contraindications. The temperature rises during the bath from ½° to 2 1-10° C. The highest temperature at which it is safe to give a child a bath is 39° C. in the axilla. The field of use for the baths, therefore, becomes quite narrow, but it still exists. No severe accidents follow their use In favorable cases the ease given by them was most marked. The children treated received from 2 to 31 baths. The greatest number in one day was four. The usual other treatment, vapor of lime-water, etc., was given in addition.

Out of 22 cases in which stenosis developed in the hospital, 6 were not considered fit for the baths; 1 got well without them—an important fact in estimating their benefit—4 had to be tracheotomized (probably because the baths were postponed too long), and 3 were saved by the baths without tracheotomy. This is a modest result, but, in so deadly a disease, the author considers it as worthy of consideration. He gives several cases in detail.

ON ABDOMINAL SECTION (*Ingleby Lectures*, 1881).

Recent progress in abdominal surgery is is almost entirely due to the application of the so-called antiseptic system. Under it, the opening of the abdominal cavity simply for exploration is an almost harmless proceeding, provided complete cleansing of the cavity is attended to. Drainage, also, is less frequently required, though it is safer to introduce a glass tube at the lower end of the wound, and syringe out the cavity with dilute sulphurous acid, a better agent than carbolic, owing to the coagulating property of the latter. *Gastrotomy*, in disease of the esophagus, should be performed as soon as there is pronounced difficulty in swallowing. It is better to open the stomach at once. *Duodenostomy* is indicated for disease or stricture of pylorus. The centre of the incision should be at the tenth rib. *Cholecystotomy* is called for in chronic and persistent cholelithiasis, and in so-called dropsy of the gall bladder. The bladder is to be opened, stitched to abdominal wall, search made with the finger for a calculus, a glass drainage tube inserted, and in a few weeks the fistula will close. *Hepatotomy*, rather than aspiration, should be resorted to in hydatid cysts of the liver. The disease is primary there, and a removal of the cyst clears the system of the parasites. *Oöphrotomy* and *nephrectomy* may be deemed suitable in early stages of encephaloid and sarcoma, in hydronephrosis, in calculus of the ureters, in floating kidneys. In a case of hydronephrosis, the cyst was opened, evacuated, the mass clamped, and three-fourths of the kidney structure removed—recovery. In another case, death on the sixth day. At autopsy, no peritonitis, but right kidney granular with narrow cortex and adherent capsule. *Splenectomy* is dangerous on account of deep attachment of organ. Has opened abdomen three times with a view to removal, but has found it impossible. *Enterotomy* will probably be much resorted to in the near future in cases of intestinal obstruction and intussusception, especially when the seat is the small intestine. If more than one obstruction is found, a wedge-shaped portion of the intestine may be removed, as suggested by Koeberlé, and the edges brought together by continuous suture, remembering that serous coat must be applied to serous coat, since mucous coat will not unite with itself nor serous.

In pelvic abscess and chronic suppurating hematocele, section may often be performed, the pus evacuated, the edges of the sac stitched to abdomen, and a drainage-tube introduced. The "tardy processes of nature" are thus anticipated, convalescence is hastened, and, often, life saved. Where the above conditions recur, and are made worse at each menstruation, the ovaries being in all probability adherent, and conception, hence, unlikely, why not open abdomen and stop the processes by removing the ovaries? The opening and drainage of abdominal abscesses is preferable before adhesion and pointing have taken place, for thus fecal fistulæ may be prevented. A sessile parovarian cyst may be treated in the same way. Gaillard Thomas' method of opening abdomen and dilating the cervical ring in cases of chronic inversion of the uterus should take the place of amputation.

Extrauterine fetation. During the first four months, if diagnosis is assured, removal of the cyst before *rupture*, or, if rupture occurs, immediate section. After the fourth month, if child is dead, operate at once; if not, wait till end of eighth month. After term, make the section on diagnosis. Let the placenta alone; drain and use antiseptics.

Oöphorectomy (Battey's operation) is safe. The mortality ought not to exceed 5 per cent. Has had *forty* complete cases with recovery. Is as easy of performance as ovariotomy. The median abdominal incision is the best. The tubes had better be removed at the same time, The indications for operation are embodied in Battey's three questions: Is this a grave case? Is it incurable except by change of life? Is it curable by change of life? In place of the ordinary Cesarean section or in place of Porro's operation, Savage would prefer Tait's suggestion that after removal of fetus, the ovaries be also removed, the opening in the uterus stitched to abdomen and allowed to drain through Keith's tube.

Oöphorectomy is suggested for fibroids, in the hope of growth ceasing with appearance of menopause.

In hysterotomy, the clamp is preferred to the ligature. Has had a total of nine cases, with six recoveries. Hysterectomy is, as yet, on trial. Is a tedious operation, attended by much hæmorrhage, and followed by great shock. Will not undertake it for the present.—*Obstet. Jour.*

HEART-CLOT AS A FATAL COMPLICATION IN THE ACUTE FEVERS OF CHILDHOOD (*Amer. Jour. Med. Sci.*, Jan., 1882).

The author refers to specimens of the thoracic viscera previously exhibited, taken during a severe epidemic of measles at the Philadelphia Hospital, and to the experience of most practitioners, as confirming his view that heart-clot is a frequent cause of death in acute fevers in childhood. Dr. J. L. Smith speaks of thrombosis of the cranial sinuses from clonic convulsion, as in the cough of pertussis, and of sudden deaths in infectious diseases from degeneration of the heart-muscle, or from ante-mortem heart-clot. And Fothergill mentions irritation of the vagus as inducing clot formation by retarding the heart's action.

To enumerate, then, the conditions predisposing to heart-clot in fevers, we have first a weak organ with a tendency to incomplete empytying of its cavities, from rapid and insufficient contraction; secondly, obstruction to free circulation, mostly found in the lungs, from either engorgement or imperfect aëration of the blood; and thirdly, probable irritation at times of the vagi, especially when subjected to pressure by the bronchial glands or inflammatory products. Further, when the blood coagulability is increased, less obstruction will suffice to produce clots. This process begins so insidiously that the most careful examination may fail to detect it. There is no one pathognomonic symptom of it. Perhaps palpation with the open hand on the precordia is the best test.

A fair impulse usually presents some fluttering or halting when a clot is forming, and there may be an intermittence in its force. Any of these signs, with insufficient radial fulness, should put us on the alert. Cold extremities, unusual pallor, or cerebral anemia are of grave omen, and, when the clot becomes extensive, asphyxia occurs. Left-sided clots are usually found where the heart muscle has been weakened, and, when the death agony has been prolonged, their color and extent show them to have preceded death by a considerable interval. A more common condition, and one which, if early detected, may sometimes be averted, is found in the right ventricle.

Any of these factors, or their combination, may account for the mortality of these fevers in children. The following are frequent post-mortem appearances: A contracted heart, the left ventricle empty or lined with a thin layer of firm, yellow clot, showing inability to empty itself; the lungs partly healthy, with emphysematous edges, partly inflamed or œdematous, and probably a general bronchitis or some broncho-pneumonia—all impeding the current from the right ventricle; this containing a firm clot, at times filling it to the utmost of its diastole, and branching into the auricle and veins.

In diphtheria and scarlatina, the asphyxia caused by the membrane, and the pressure of the enlarged bronchial glands increases the tendency to this formation, while, in measles, the obstruction from the catarrhal condition has the same effect. It must be carefully watched for, as it gives an indication for special treatment.

The early use of an alkali should be associated with the stimulating and supporting treatment. Carbon. ammon. is probably most reliable, but must be used from the commencement, as we have no knowledge that a clot once formed can ever be reabsorbed. The usual recourse to this drug, when everything else has failed, has led us to doubt its efficacy, but, as a *preventive* of heart-clot, it is most valuable. Probably salicylate of sodium will prove of use in early and increasing doses (? J. F.). Beside the endeavor to lessen coagulability, we should try to regulate the heart's action. Digitalis and belladonna are potent agencies. It is probably better to begin with the latter, and withhold the former till later on. Nitrite of amyl might be of use when much systemic venous engorgement exists from cardiac debility, without pulmonary obstruction, by restoring the balance of the circulation and relieving the right heart. It would act more favorably than digitalis, which tends simply to drive a weakened heart without relieving it of its contents (? J. F.), and in the effort causing final exhaustion and a fatal issue.

Stasis from broncho-pneumonia would also contraindicate digitalis, and we should try rather to relieve the pulmonary engorgement by counter-irritation, as friction, warm baths, dry cups, or local steaming.

MEDICAL SOCIETIES.

"Vitæ Post Scenia Dicunt."—LUCRETIUS.

THE TRI-STATE MEDICAL SOCIETY.—In its composition this society is something anomalous. It has however, all things considered, achieved a remarkable degree of success, and appears destined to become a permanent institution. In point of numbers the meeting held at Terre Haute was a success, but the programme of the society was not fully carried out. The President, Dr. J. M. Holloway, opened the meeting by calling for reports of committees. Dr. J. E. Link, Chairman of the Committee of Arrangements, made a report as to the railroad rates, etc., and then, after a brief allusion to the work of the society, said, as part of the address of welcome :

" Sanitation is a word magnanimous in meaning for good and scope, and so in many things, the less extended the more potent in its density, or, in other words, as we strive to do too much we by overreaching do harm. There are fallacies in fashion, and insanitation, it seems to me, just now is the greatest fallacy of them all. In this city for the last few years there has been advanced a theory popular and deleterious to our interests and comforts. It has been publicly promulgated and is entertained that our drinking water is being poisoned by the drainage of filtering from our vaults and sinks, and hundreds have been driven from our cool, refreshing wells to the hydrants supplied by the Wabash river. It has been claimed by those in high authority that the privy vaults of private families were capable of poisoning our wells situated at a distance of forty feet away, and I shall give but a few facts here of observation. First, that our soil is composed of sand and loam four feet, and certainly the most favorable for filtering and disinfection, and then a few of the points as claimed by those who are supposed to be scientists. First : That as the chlorides in small quantities have been discovered in some of the wells that necessarily there must be more or less poisonous material carried with it from its source, which, they claim, must necessarily be the old privy vaults near by. Now, whilst chlorides may have found way from privy vaults, I claim that it is not necessarily deleterious to health or foul, but a part of the original constituent of the earth, purified, healthy, and clean for use. Again : That sulphuretted hydrogen gas and carbonic acid gases have been found in old wells and sinks, and that they must come from vaults and offal of a crowded population, and that consequently the drinking water is polluted. I claim that if all these were the products of such causes, they would not necessarily be injurious to health if taken into the stomach in the water we drink, and as long as these things can be deposited in the earth and realize its purifying agency that no expense, time or anxiety need be devoted to them ; and, further, that the water, so pure and grateful as it comes from our wells, should not be foregone and replaced by that so much less desirable in taste and cleanliness as that taken from the river, and holding in solution and suspension the decaying animal and vegetable matter which reaches our stream from the surface, or storm water. A careful examination of the oldest vaults of our city reveals the facts that less than three feet from the wells the earth is clean and unstained—so effective are the purifying and disinfecting properties of our soil—and that dry vaults, or vaults sunk into the earth fifteen feet above the coarse gravel strata and water line, walled with unmortared brick or wooden braces to support the earth and at the same time to allow the earth to absorb the gas and moisture, is far better than to deposit the filth in sewers or cemented vaults, to emanate gases, which more or less reach the air we breathe. That outside dry vaults are far preferable to sinks connected with our houses or living apartments by any method. I am convinced that no connection can be made secure against the escape of gases, and with this that disease is propagated and spread through any system of sewerage in a way and to an extent not possible through the earth when there is a filter of sand and the disinfection of loam as we have it here and in many other places. I call your attention to this subject briefly, and ask you in the name of science and the interest of our beautiful little city to give the subject a part of your time and attention. I claim it as a right, being one of you, and I ask it as a favor on behalf of the community in return for what they have done and shall do for us. I ask that a committee of three, one from each of the States, be appointed to investigate and report during the time of the meeting for publication in our secular papers for the satisfaction and protection of our citizens."

Dr. S. W. Burton, of Mitchell, Indiana, submitted the following report as Secretary:

" For the year now ending there has been nothing unusual in the Secretary's office, excepting an increase in correspondence. Gentlemen from all parts of the country seem anxious to know something of our plan of organization. I have very many times endeavored to explain the peculiarity of our association, and yet it seems there are very many who do not understand. It may not be out of place to call attention to that matter now. To any strangers that may be present I will say that our organization is peculiar in that it does not deal with ethical matters; has no constitution, no by-laws; and yet, that it may not tend to disorganization of other societies, but rather to aid them, it is an accepted rule that we receive none to membership who are not regular physicians and reputable in the communities where they practice. Members of the American Medical Association, of any of the State or county societies, are received without question. Those of other schools than regular are not eligible to membership. In fact, we receive no one except such as are duly qualified to enter their State or the American Medical Association. Gentlemen of the Indiana State Medical Society who desire membership in this will be received on application. Also, members of the Illinois and Kentucky State Societies. Yet the latter two have a reputable membership who are not members of their State societies, who will also be received on application. Gentlemen who belong to neither of these societies must furnish vouchers. I hope that with these statements there will be no misunderstanding among the correspondents of the year. I have received acknowledgment of the membership of J. Mathews Duncan ; also of Spencer Wells, the great European ovariotomist, who promises to contribute when anything of real merit presents itself. The publication of transactions I know nothing about. I have gathered up quite a number of antique books and journals which I propose to make over, together with all my medical library, journals, etc., to this society, to be the property of the society as long as the organization continues. I have at present about 275 volumes. While the number is not large, it is such as I have, and it is to be a free will offering to the society."

After various resolutions had been offered respecting membership and the receipt of the Treasurer's report, Dr. G. Wheeler Jones, of Danville, Illinois, read a paper on "The Origin of Heat in Fever," in which he took the ground that the nervous system possessed a marked thermogenic function.

Dr. C. P. Hunter read a paper on "The Use of Iodine in Fever." He had excellent results from the use of iodine, not only in malarial fevers, but also in diphtheria and typhoid. He regarded it not only as antipyretic, but also as antiseptic. It was to the latter property that it owed its effects in fevers.

Dr. D. S. Brook's, of Sparta, Illinois, paper on "Is the Child Legitimate?" was read, in his absence, by the Secretary.

After tracing the great interests involved in the legitimacy of a child, such as honor, goods, chattels, etc., all coming indirectly within the purview of the medical man, the author extended the comparison to the so-called newborn child, Typho-malarial fever. This fledgling truly possesses traits and characteristics nearly allied to the first child in many of its features, but yet lacking enough of the distinctive features to justify the medical profession in refusing to recognize the stray as the original.

The child, Typho-malarial fever, was born some time during the summer of the year 1862, upon or near the Chickahominy river, in the State of Virginia, then disputed territory, but now forming a part of the United States of America. Paradoxical as it may seem, in the begetting of this child three, and likely four, parents or factors must play a part. They are: (1) Malaria, from the Latin *malus*, bad, and aria, air; (2) ochlesis, from the Greek, meaning crowd rub, but now used for crowd-poisoning; (3) Zymosis, used in its restricted sense, for ferments of organic origin, such as micrococci, bacteria, etc., which may enter the system either through air or water; (4) Scorbutus, a disease or condition of the system produced by unwholesome food. Taking the ground that this child of such numerous parentage was the original, he gave quotations from Woodward and other prominent army surgeons in proof of his statement. In closing he said: "I have had opportunities, and I have tried to profit by them to see the *true* and *false* typho-malarial fever, and if related at all, I regard such relationship as not near enough to call them twins."

The President then delivered his address.

Address of the President.

I am indebted to the partiality of the nominating committee of the meeting at St. Louis for the honorable position assigned me on this occasion. The presiding officer is in your debt, gentlemen, to the extent of an address, and he will now proceed to discharge that obligation. If he sets a good example by his brevity, and those who succeed him in the presentation of papers follow his example, there will be reason for the hope that the immense amount of business on the programme will be placed before the society, profitably discussed, and thoroughly digested.

What seems uppermost for present use in practice? I can only answer the question imperfectly, for the bare enumeration of recent discoveries, new remedies, mechanical appliances, clinical observations, and the correction of errors in practice would exhaust the hour.

Is it possible that the consumptive may yet have reasonable hope that his disease, hereditary or acquired, can be checked, jugulated, and prevented, as malarial diseases are now managed? It affords me infinite pleasure to say that I verily believe it. And the attention of the skeptic may be called to the cellular pathology of Virchow—what a rumpus it caused amongst histologists and pathologists a few years ago! And a little later, when Cohnheim electrified the scientific world by demonstrating the passage of anatomical bodies through structureless membranes without lesion, giving a prominence to the leucocyte in the process of growth, development, and repair that had hitherto been monopolized by the connective tissue corpuscle.

The speaker followed up the subject:

In operative surgery much has been accomplished of late in lessening the death rate, and in enlarging the range of operative procedures. I will call your attention to Esmarch's bloodless method. Those of you who have entered upon your professional careers since the elastic compressor supplanted the field and horseshoe tourniquet and digital compression can never fully appreciate the difficulties and dangers that beset your seniors. Mechanical appliances too numerous to mention; many too complicated for general use; others altogether too fanciful; some actually hurtful, but a large number valuable in skilful hands for the relief of pain, the correction of deformities, and the arrest of otherwise destructive inflammations, have arisen. Permit me to single out the simplest of these: Dr. Martin's elastic bandage. Dr. Martin did not predict half of what we know of this bandage to-day. We might have adjudged him an enthusiast once, but we now wonder at his modesty and reserve. It is claimed for it that it cures chronic and indolent ulcers of the leg; hastens the cure of injuries and diseases of some of the joints, is useful in rheumatism and neuralgia, etc. It can be used harmlessly as a remedial agent, even in unskilled hands. In regard to the ordinary roller bandage Dudley and his successors understood its modus operandi and its dangers in careless or unskilled hands. Mr. Martin's appliance differs in no essential particular from the roller bandage, except in enlarging the application of the rubber bandage. The principle underlying each is the same, but the latter is more efficient, and requires less frequent and skilful manipulation. Its employment teaches us the effectiveness of concentric compressions in removing congestions, in hastening the reabsorption of effusions and of semi-solid and (indirectly) solid exudates; in hastening, imperiously forcing, repair.

There has been a revolution in the treatment of that dreadful yet common disease, syphillis. The observant syphilographer is now able to speak with confidence as to the duality of the poisons which produce local and constitutional syphilis, as to the possibility of actual differential diagnosis, and that it can be cured by specific treatment. Another subject that is uppermost with the doctors, at any rate with the city doctors, is Homœopathy—so-called. The village and country doctors have not as yet been much exercised by this unethical disturber of the peace. Be warned, Mr. Village and country doctor! You may not always complacently view the battle from afar, unless your wisdom be greater than ours. Perhaps, already, your territory has been invaded by at least a case of pellets and infinitesimals! The dispenpenser thereof will ere long find lodgment in your midst.

Until recently the subject of homœopathy has been strictly a personal one, receiving an undue share of attention in this country through the medium of public addresses and medical periodicals. New York, however, is entitled to the doubtful honot, through its State Medical Society, of giving it the first formal recognition as an ethical disturber of the peace. It remains to be proven by the light of future history whether the American Medical Association acted altogether wisely at St. Paul in noticing the bad behavior of its New York members. This is certainly not a proper subject for discussion from an ethical standpoint by this society on this occasion. It might not seem out of order, however, to express a regret that so large a body of general practitioners as the homœopathist claims for New York and other large cities, cannot educate—or import—enough specialists of their own way of thinking, to satisfy the demand. It is a great pity that the New York city specialists (regular) are forced for humanity's sake solely to give aid and comfort and recognition to a class of doctors who cannot be recognized or consulted within general practice. It seems that, in this one particular, the law of supply and demand is a failure. The people demand homœopathists and they are supplied. The people also demand acceptable homœopathic specialists, but the supply is not forthcoming! Seriously speaking, much that is good can be said of Hahnemann and his trustworthy followers. For instance, the influence exercised by them in setting clinical observers to work in recording the natural history of disease. Bennett and Flint, with many others in Europe and America, recognizing the fact that Hahnemann, in honestly carrying out his theories in reference to the law of similars; the potency of the higher dilution or infinitesimals; the efficacy of olfactions; the causes of disease being impalpable, immaterial, spiritual, dynamic—had demonstrated that man's affections were recovered from without being subjected to the course of therapeutics taught by the professors and in the text books, instituted a revival of the method of Hippocrates; and set to work to study the natural history of disease. You are well aware of the results; how it has proven that pneumonitic and many other self-limiting diseases get well on mint water, suitable diet and good nursing. In fact in comparing the statistics of Hahnemann and the Hahnemaniacs with those presented by regular practitioners, the success of the mint water treatment is found to be greater than that of homœopathy.

While, then, due credit should be accorded these gentlemen for reviving a more rational method in pursuing the study of disease, no credit should be given them for either cutting short or curing those diseases with similars or infinitesimals. In another respect the homœopathist of the present day has been of service to mankind and to the regular profession as well also, by demonstrating that the dosage of medicine can be lessened and the mode of administration be improved. No well educated and candid homœopathist of this day and generation relies strictly and solely upon similars. For the mitigation of pain, the arrest of paroxysms, and the cure of intermittent diseases all of them resort to "contraries." Moreover, they, like the regular practitioner, recognize the incurability of some diseases by any plan of treatment. But in the administration of remedies they exercise great care in rendering them as tasteless, as dilute, and as free from offensiveness to sight and smell as possible. And in this respect they have have exercised an influence for good. And on this account, we might add, they have great influence with the people. The people when sick, do not stop to argue about the principles underlying the plan of treatment to bc adopted in their case ; and, when well, are too busy in the various avenues of business and too indifferent, withal, to study medicine. The people wish to get well ; and that, too, with the least possible discomfort, and any painstaking exercised in securing palatable remedies for them appeal to a pardonable weakness.

The regular doctor, therefore, cannot now, as a rule, force upon his patients bulky doses of medicine, especially if they are disgusting to sight and smell. The druggist and pharmacist have not been slow to recognize this ; as may be attested by a careful inspection of the various displays in this hall.

To return to our homœopathic brethren—so-called. I doubt very much whether they claim any reward for their zeal of faithfulness in the effort to to improve the physicing of the people —not, at any rate, from the regular doctor in the way of ethical recognition. If the half that is claimed by them be true, and that is spread broadcast by the clients. In all conscience they are reaping a rich pecuniary reward for their labors, and should rather decline consultations and shun recognition. To listen to the people who "take homœpathy" one would suppose that each patient was the homœopathic doctor's book-keeper and balanced his cash, for they profess to know exactly how much money their doctor has made in the past month or year, and how many patients he prescribes for daily. More than one of these enthusiastic supporters has informed me that his or her doctor rarely prescribes for less than from fifty to one hundred patients during the two or three hours spent at the office ! I regret to confess that it is not possible for a regular doctor to such an amount of professional work in the time stated. I doubt if the pharmacist could dispense the proper remedies to so large a number of customers, even under the present improved methods.

The speaker closed with proofs that the homœopathists administer calomel, quinine, morphine in appreciable quantities.

Dr. Burton, of Mitchell, Indiana, moved that the president's address be published in an appropriate form, and that the publishing committee have five hundred copies printed for circulation among members of the society.

Dr. J. L. Thompson read a paper on "Ocular Therapeutics."

Dr. Morrell Mackenzie, of London, gave a brief informal talk on "Laryngitis."

Dr. T. J. Willien reported a few cases of abdominal surgery.

Dr. Houghton, of Indianapolis, read a lengthy paper on "Laparotomy."

Dr. Charles H. Hughes, of St. Louis, read an extended paper on the "Mental Status of Guiteau," in which he took the ground that Guiteau was insane, and that his conduct was not the result of simulation.

Quite a discussion then arose between Dr. Eastman, of Kentucky, and Dr. Keller, of Hot Springs, as to the character of President Garfield's wound, and the action of Drs. Agnew and Hamilton in supporting Dr. Bliss' bulletins. The discussion waxed warm until the President ruled it out of order, as foreign to the paper which brought the matter up, Dr. Hughes' "Mental Status of Guiteau." Dr. Parvin, of Indianapolis, after obtaining an affirmative answer to his question whether the paper had not mentioned the wound, remarked that the paper itself had gone out of its latitude.

Dr. R. Owen, of New Harmony, Indiana, read an extract from a paper on "Embryology," previously read before the American Medical Association.

Dr. J. Little, of Bloomington, Illinois, read a paper on "Hernia."

Dr. J. E. Link then performed an amputation of the thigh, using whiskey as an anæsthetic. He then gave the result of his experience with alcohol in anæsthesia. Numerous questions were asked by the members as to the effect of the alcohol, as compared with chloroform and ether. The good effects of alcohol were vouched for by several resident physicians, when called upon by Dr. Link, for corroboration of his statements. The manner of administering the alcohol in one case and the effect in bringing about the state of insensibility to pain, were given by Dr. Byrd, of Quincy, Illinois.

Dr. Eastman, of Indianapolis, made an eloquent speech in support of Dr. Link's theory, and congratulated him on bringing alcohol out of the gutter, and placing it in the hands of skilful surgeons to relieve human suffering.

Dr. Mitchell mentioned one instance in which Dr. Link had failed to anæesthetize a patient, and had been compelled to resort to chloroform to complete the operation. He is a strong anti-alcoholite man, and it "went against the grain" for him to speak favorably of alcohol, as an anæsthetic, when asked to do so by Dr. Link, whom he had assisted in several amputations.

Dr. Armstrong, of Terre Haute, Dr. Chambers, of Charleston, Dr. Carson, Dr. Huges, of St. Louis, Dr. Swafford, Dr. D. Laughlin, of Orleans, Dr. Haughton, of Indianapolis; and Dr. Prince took part in the discussion of the subject. Dr. Mitchell endeavored to obtain the floor the second time, but was ruled out of order. He explained that he had not finished the first time, but his efforts were futile. Dr. Stokes, of Grayville, Ill., followed in a paper on the use of the swathing band.

Dr. J. J. Speed, of Louisville, Kentucky, read a paper on "Mind as a Therapeutic Agent," in which he took the ground that the influence of the imagination played an enormous part in even surgical operations. Dr. W. L. Bennett read a paper on "Lacerated Perineum." Dr. Corningore, of Indianapolis, reported several cases of fracture of the forearm. Dr. W. H. Byrd, of Quincy, Illinois, read a brief paper on "Trephining the Frontal Sinus," which was discussed by Dr. Elizabeth S. Norred. Dr. Harvey, of Indianapolis, reported cases of "Extra Uterine Pregnancy."

The following were the officers elected: President, Dr. Wm. Porter, St. Louis; First Vice-President, Dr. James Eastman, Indianapolis; Second Vice-President, Dr. Jas. Letcher, Henderson, Ky; Third Vice-President, Dr. Chambers, Charleston, Ill.; Secretary, Dr. G. W. Button, Mitchell, Ind.; Treasurer, Dr. F. W. Beard, Vincennes, Ind. The place of next meeting will be Indianapolis, Indiana, on the third Tuesday of September. After the usual votes of thanks the Society adjourned.

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Oil of Peppermint in Neuralgia.—Dr. Meredith, in the *Birmingham Medical Review*, recommends oil of peppermint as an external application for allaying the neuralgic pain so often complained of in cases of *Herpes zoster*. He has used it with great relief to the patient even when the eruption was out in a fresh florid condition. He thinks that the value of this remedy in relieving neuralgic pain deserves to be better known.

CORRESPONDENCE.

"Sit mihi fas scribere audita."

NEVADA, IA.

Dear Doctor :

On January 8th, 1883, Thomas R., aged 25, laborer, native of Scotland, stout, heavy built, in excellent health with a good family history, was bitten on the left index finger by a fellow laborer, the wound was apparently only the depth of the skin on the palmar surface near the end, and the imprint of one tooth was visible on the nail. The wound on the palmar surface was one-half inch in length. He immediately walked three miles to the nearest village, where he applied to an irregular practitioner to have the wound dressed. The learned doctor scrutinized the wound very carefully, and gravely announced to the patient that he was suffering from blood poisoning, and that he would have to disinfect the injured member, which he proceeded to do by immersing the finger in a saturated solution of carbolic acid. Keeping it there for twenty minutes, the patient returned home immediately, and on removing the bandages, three hours afterward, he found the finger black as ink, with a glossy shining appearance. The finger, on the twenty-fourth of the same month, was dry and shrivelled with a distinct line of demarcation between the dead and healthy tissue. As amputation was clearly demanded, I resorted to it at once. Up to that date I had never seen the report of a case of that kind; since then, however, I have seen the report of one very similar case, in which the finger was saved by J. B. Garrison, M.D., of Garretson's Landing, Ark., in the June number of the *Western Medical Reporter*. Had my case been seen as early as that of Dr. Garrison's, viz,, the third day, perhaps it might have been saved by the method adopted by him, which I will give in his own words. He says, "Although there seemed no possibility of saving the finger, as it had actually lost every vestige of vitality, yet I directed a small rubber band to be tied around the finger near the meta carpo-phalangeal articulation (which is the point where I amputated in my case) sufficiently tight to obstruct the reflux of venous blood without repressing the arterial supply. This was applied for five or ten minutes every hour and kept up continuously for over two months. The tissues of the finger gradually yielded to the mechanical pressure of the blood, and the digit resumed its shape and functions, except that it was entirely denuded of integument." The doctor thinks this was a very fortunate result, in which conclusion I fully concur, though in his case there was no laceration of the tissues. The chemical used being a diffusible substance would undoubtedly penetrate the tissues to a greater extent where there was a laceration than where the integument was intact.

Yours, respectfully,

LEWIS SCHOOLER, M.D.

SHERMAN, TEXAS.

Dear Doctor :

Mrs. C., aged 26, was married nine years ago. Had a miscarriage about two years afterward, at three months advancement. Has now four children, the eldest six years and the youngest six months of age. At second confinement gave birth to twin boys, now three years old. Patient was brought to me by her family physician, Dr. D. A. Simmons, of Whitemound, in this county. Stated that during her last term of gestation she suffered more or less pain in region of right ovary, and a few days after confinement discovered a lump in right side about as large as a hen's egg. The patient, though somewhat lean, presented the appearance of being pretty well nourished for a woman nursing a six months' old babe. Upon examination an ovarian tumor was diagnosed, having its origin from right ovary. The abdominal walls were lax and the tumor being freely movable, was believed to have no adhesions to neighboring parts and to have liquid contents. The uterus was retroverted and crowded downward, and measured two and one-half inches from os to fundus. Upon digital examination a mass as large as a hen's egg was felt in Douglas' Pouch and to right of uterus, and believed to be the ovary from which the tumor sprang. Considering the rapid growth of the tumor, the patient's abdomen looking like that of a woman seven months advanced in pregnancy, and she being in fair health, prompted me to advise an early operation before adhesions should form and her health break down. To this she readily consented, and a week thereafter, she was instructed to wean her babe, and was put upon iron as a tonic, with daily sponge baths of mustard water. During first week an abscess formed in one mamma, was lanced and soon healed. On the 28th July following, the patient's bowels being well moved the day previous, assisted by Drs. Simmons, Grizzard, Thompson and Kenedy, and in the presence of five other physicians, I proceeded to operate. Patient being chloroformed by Dr. Grizzard, an incision two and a half inches in length was made through the abdominal wall in the linea-alba midway between the umbilicus and pubis. I then examined for adhesions by sweeping a steel sound around the tumor but could detect none. Being imbued with the idea from the start that I was dealing with a liquid tumor, without further examination I plunged into it a Wells' trochar for the purpose of tapping, but soon discovered that it was solid. Withdrawing the trochar and introducing my finger into the opening made by it I found the mass to be friable and easily broken up. I could now have easily removed the tumor entire by enlarging the opening to a point above the umbilicus, but being taught that the gravity of such operations is in proportion to the length of the incision through the abdominal walls, and blood already having escaped into the cavity, I only enlarged it sufficiently to admit my hand between three and a half and four inches. Thrusting my fingers into the mass, I so broke it up by gouging off pieces, some of them as large nearly as my fist, that by a tight squeeze I was enabled to bring it out at the opening. A broad membranous pedicle embracing a considerable portion of the broad ligament was disclosed, with the right fallopian tube attached to the tumor above. A needle armed with a double ligature was now thrust through the pedicle and tied both ways, one of the ligatures embracing the fallopian tube near its uterine attachment. The pedicle was now severed close to the ligatures and the mass removed. It was now discovered that when these ligatures were tightened a rent or split was produced between them which necessitated further ligation. Another ligature was thrown around the whole just below the other two and made fast. Blood now ceased to flow from this point. A small adhesion existed with left broad ligament, which upon lifting up the tumor, tore loose and left a strip of membrane hanging. This was ligated and the strip clipped off. A strip of omentum some two inches in length was by some means torn loose and left hanging. This was also ligated and the strip clipped off. All the ligatures, five in number, were now clipped short, and the cavity thoroughly cleansed of all clots, blood and bits of tumor, of all of which a considerable quantity had escaped into the cavity. In sponging out the cavity a one to forty solution of carbolic acid and water was used. The incision was now brought together with seven silver wire sutures, a piece of flat sponge having been placed within the cavity beneath the incision to absorb any blood that might flow from the needle punctures. After the oozing ceased the sponge was removed, and a last look taken into the cavity. The cavity being free from all extraneous matter, the wires were tightened, twisted, and clipped. Two layers of cotton batting saturated with a one to thirty solution of acid and water was now applied over the wound, and over this dry cotton and a layer of oil silk. The whole was enveloped with a broad flannel bandage pinned around the pelvis. Patient was now put to bed and a hypodermic injection of morphia administered. The dressings were not molested for four days. Her temperature rose five hours after the operation to 101¼ and for next six days averaged a little over 100°, the highest for two days only being 102¾. She was fed for ten days on beef essence both by stomach and rectum, milk not being borne by stomach. Five grains quinine with a quarter grain morphia was given her every six hours for ten days. During this time when pulse became feeble fifteen drops tr. digitalis was given every six hours. At times flatus would collect in stomach and bowels and was invariably relieved with five drops turpentine. A part of the time patient's urine was drawn with the catheter and at others she was allowed to pass it on cloths. The sutures were removed, two on the seventh, two on the eighth, and the balance on the ninth day after the operation. Bowels were moved by enema on the tenth day. The external wound was kept covered with carbolized cotton for three weeks, at the end of which time she was allowed to sit up and at four weeks to walk about the room and go to the table for her meals. Success in this case is no doubt attributable to the thorough antiseptic precautions used throughout, viz.: The sponges used in the operation were soaked for several days previously in a one to thirty solution of carbolized water, and all instruments, needles, and ligatures at the time were immersed in a similar solution. The external wound healed by first intention, not as much as a half teaspoonful of pus forming during the whole time. Patient returned to her home thirty-six days after the operation with instructions to wear for several months an abdominal support or bandage. The tumor weighed five and a quarter pounds and had a somewhat nodulated surface. Not being able to determine the character of this tumor, I sent a specimen of it to Prof. F. L. James, of College Physicians and Surgeons, St. Louis, who kindly made a careful microscopical examination of it and reports that he was unable to discover any evidence of malignant disease in it, but that its general character was that of hypertrophy, with proliferation of tissue both fribrous and cellular.

Very truly yours,
J. B. Stinson, M.D.

Leesburg, Tex.,
October, 1882.

Dr. E. S. Gaillard.

Dear Professor.—In an issue of your *inestimable* Journal I noticed a communication from Moffet, Texas, over the signature of "*Inquirer*," wanting a "regular chill smasher." I send the following plan of treatment, which is known to answer the purpose in Texas. Let him give his patient, poisoned with malaria, from two to three doses of calomel rhubarb and ipecac, each dose to contain 5 grains each of the two former, and from ½ to 1 grain of latter to be given at intervals of 4 hours. Follow the last dose in few hours with epsom salts dissolved in weak infusion of snake root, or water if the snake root cannot be had. He must interrupt the next paroxysm with quinine then place the patient on the following formula, and he has his "chill smasher:"

R. Quinine sulphate, one drachm; ext. nux vomica, 10 grains; Amonia cit. iron (soluble), one drachm; acid sulphuric, 15 drops; water, ten ounces; whiskey, ten ounces. M. By rubbing up the nux vomica thoroughly first, then adding the rest. Dose.—One tablespoonful three times a day before meals, for 30 or 40 days.

I am delighted with your Journal.

Respectfully,

J. LAWSON FELDER, JR., M. D.

CHICAGO, ILL., 1882.

The desire for some more speedy method of publishing, and distributing the transactions of the American Medical Association than has been attained, through an annual volume, led the Associatiation, at its last meeting, to decide to journalize its proceedings, and publish them hereafter in the form of a Medical Journal, provided the members of the Association and the profession at large will insure its pecuniary success. This may be secured by the prompt payment of the annual dues of members of the Association, and of subscriptions by those not members. The journal is to be under the control of the Association, through its trustees, and to be issued and supplied in place of its annual volume of transactions. It will be known as The Journal of the American Medical Association. The trustees will, if they receive a sufficient number of subscriptions, feel justified in recommending to the Association the propriety of the change, and the adoption of the following plan: To issue a weekly journal, each number to contain thirty-two double-column pages of reading matter, and which shall embrace the following departments:

I. Original Papers, Addresses, Reports, and so forth. This will include all the papers read before the Association, and its sections, which are referred for publication.

II. Leading Editorials on the Scientific, Educational, Social, Sanitary, Ethical and other interests of the profession.

III. Editorial Summary of progress in the several departments of medicine, and the collateral sciences, including reviews of new books.

IV. Notices of the proceedings of Medical and Scientific Societies throughout the country.

V. Correspondence, Domestic and Foreign.

VI. American Medical Association Intelligence.

VII. Miscellaneous Medical News.

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Through the medium of such a journal, the proceedings and papers of the Association will reach the members much earlier each year, and by its frequent visits, and its large amount of additional matter of value, it will maintain a much more active interest on the part of the entire membership, while its notices of the proceedings of the several State societies will tend to bring those members into closer relationship with the national society, and thereby greatly aid in the extension and usefulness of the social organizations of the whole profession.

The intention is to place the journal under as efficient editorial supervision as a fair salary will command. All members of the Association who pay the annual dues ($5.00), promptly, will then in act be subscribers, and will receive the journal as it shall be issued. To those not members of the Association the subscription price will be $5.00 in advance. To enable the Association to propose at its next meeting whether to make the proposed change in its publications or not, you are hereby requested to give your pledge of support by signing the enclosed printed card, and your address without delay to the undersigned. If the pledges of support are sufficient to justify the adoption of the plan, the first number will probably be issued on the first of July, 1883.

N. S. Davis, M. D.,
President of Board of Trustees,
65 Randolph Street, Chicago, Ill.

Dr. Frank H. Hamilton, of New York, in submitting to the Board of Audit his bill, amounting to $25,000, for services rendered to the late President James A. Garfield, wrote to Judge Lawrence as follows:

New York, 1882.

Hon. William Lawrence, Comptroller, &c.:

Dear Sir:—I received your note of the 19th ult., calling my attention to the fact that the Board of Audit is awaiting the presentation of my claim against the estate of the late President. * * * Availing myself of your suggestion that I may make to the Board any further communication which I may deem proper, I will say that in the presentation of a claim which I know cannot be paid out of the sum of money ($35,500) placed at your disposal by Congress, my intention is only to indicate to you what I would regard as the minimum compensation for similar services in the case of a private citizen who was pecuniarily responsible and who would not be embarrassed by such payment. * * * I will further say, that while I do not make for myself any relative claim; I must protest against the presentation on the part of one of the physicians in attendance of a relative claim to the effect that he is entitled to "receive double the fee of any other physician in attendance," which claim was laid before the House committee, and may have been laid before your Board.

Thanking you personally for the extra official trouble you have taken in calling my attention to this matter and disclaiming any intention in what I have written to instruct the Board or to question its ability to perform its duties intelligently, I am yours respectfully, Frank H. Hamilton.

The above letter was accompanied by a specific statement of the nature of the services rendered, at the conclusion of which Dr. Hamilton said:

These circumstantial statements I make with reluctance, but they seem to be rendered necessary by the fact that there are intimations to the contrary contained in the report of the House Committee, and obtained apparently from sources which the committee considered reliable. Moreover, Congress has chosen to place the payment of the medical attendants upon a purely business basis, and your Board has therefore properly instructed the claimants to describe fully the services rendered.

The sole item which I have to present to your Board as the basis of my claim is my long attendance upon the late President as a consulting surgeon, with its accompanying responsibilities, which God forbid I shall ever again be called upon to bear.

TRANSLATIONS.

"Umbi mel ibi apes."

On the Use of the Hydrostatic Balloon in the Treatment of Premature Labor. By DR. L. HAMON (de Presney). Translated by Dr. H. McS. Gamble, Moorefield, West Virginia, from *L'Abeille Médicale,* No. 18, May, 1881.

There are some methods so advisable from the excellence of their effects that we cannot too strongly insist upon their as the use, sole means of introducing them into general practice.

This remark is especially applicable to the employment of the hydrostatic balloon in premature labors. I have frequently insisted upon the extent of the service that may be derived from this valuable hæmostatic agent and cervical excitant.

In the present article I shall confine myself to pointing out one of its happiest applications. I propose to show by the history of two clinical cases, the part it may be made to play in abortion. The entire rationale of this procedure is very simple. A premature labor threatens; this accident is announced by a hæmorrhage more or less abundant. If the loss is considerable, if clots of blood are expelled in great quantity, we can not expect a continuation of the pregnancy. The indication is to induce as soon as possible the evacuation of the uterus. The surest, and at the same time the safest proceeding, is the following: we remove the blood clots collected in the utero-vaginal dilatation, then we introduce into this same dilatation the oiled caoutchouc balloon. This introduction accomplished, we expand the balloon with cold water. The quantity of liquid injected varies according to the capacity of the vagina. We stop only when the patient experiences a disagreeable feeling of fulness. The first effect of the hydrostatic balloon is to put an end to the flow of blood. This application made, the accoucheur has nothing more to do but to wait patiently the spontaneous termination of the premature labor, which generally takes place after a few pains, more or less severe; sometimes the labor ends silently.

In any case it is improper to make any attempt at extraction by the portion of the placenta engaged in the cervical orifice. If we discover this engagement after the withdrawal of the balloon (investigation which nothing prevents being made several times if deemed advisable) it is necessary to be careful not to draw upon the cotyledon for fear of rupturing it. This foreign body, which exactly fills the cervical isthmus , constitutes, in effect, a valuable hæmostatic agent. We must then leave things as they are and replace the balloon. With patience, without the woman being exposed to the least accident, there comes a moment in which the delivery takes places spontaneously. We withdraw the balloon and we find in the vagina, the placenta evacuated in its entirety, with clots of blood in greater or less abundance.

The two following cases will give a clearer idea both of the procedure and of its advantages:

CASE I.—Pregnancy of three months. Abortion. Mme. X., 42 years old, pregnant three months. She had been losing a little blood for eight days, when, on the 10th of August, 1880, she was taken at six o'clock in the morning with a more or less abundant hæmorrhage from the uterus. At the time of my arrival the face of the patient presented a cadaveric aspect.

After having removed numerous clots collected in the vagina, I was able to assure myself that the neck, hard and very thick, presented no dilatation. Immediate application of the hydrostatic balloon which I injected with cold water. From that moment all hæmorrhage was definitely ended. The pains were not established until half-past two o'clock in the afternoon. At six o'clock in the evening I was able to satisfy myself that everything was proceeding favorably. A portion of the placenta, about the size of the half of a hen's egg, was engaged in the neck. I took care not to apply the least traction to the after-birth. I replaced the balloon and retired, announcing my return at 10 o'clock in the evening. At this time I found the same state of affairs. A few prudent attempts at extraction having proved unsuccessful, I replaced the balloon and took leave of the patient, promising her that the next morning the withdrawal of the balloon would be followed by that of the secundines. From that moment complete suspension of the pains. The 11th of August, in the morning, I removed the balloon and found behind it the placenta the size of a hen's egg. Having opened the after-birth whose integrity was was perfect, there escaped only a small quantity of liquid from its central cavity. There was no trace of an embryo.

Case II.—Pregnancy of two and a half months. Hæmorrhage profuse. Excellent effects of the hydrostatic balloon. Mme. B., multipara, 24 years of age. Pregnant two and a half months. March 27th, 1880, moderate loss of blood. Rest in bed, injections containing laudanum, with the view of preventing an imminent abortion. March 28th, at 5 o'clock in the morning, hæmorrhage very free; pains quite active all night. On my arrival at half-past five, the patient declared that she had never suffered as much, nor lost as much blood in any of her previous confinements; cervix closed. I confined myself to applying the caoutchouc balloon which I inflated with cold water. From that moment complete suspension both of hæmorrhage and pain. It was not until the next day, 29th, at 4 o'clock in the afternoon that I removed the balloon, which, thus, *had remained in place thirty-five hours.* The after-birth, in its entirety, had fallen into the vaginal pouch ("ampoule"). The patient recovered very quickly, without the least hindrance.

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REVIEWS.

"Judex damnatur cum nocens absolvitur."

The Physician himself and what he should add to his Scientific Acquirements. By D. W. Cathell, M.D. Second Edition. Carefully revised. Baltimore: Cushing & Bailey. 1882. 8vo. pp 208. Price $1.25.

Copies of both the first and second edition of this work were received promptly after their issue, but they have remained up to the present time, unnoticed in this department of the Journal. This has been due, first to the fact that notices of books published before and after these periods have, from various causes, absorbed the space available in each number of this Journal, but chiefly for the reason that, after a careful examination of the work now under review, it was apparent that much which is unwelcome must be said; and the period for saying this has been naturally deferred.

If unwelcome reviews of this book had been made by the Press generally, it is probable that the convictions in regard to it would have been promptly published, but as the Medical Press has so generally been lavish in its unmeasured praises, and prodigal in indiscriminate eulogy, it was but just to the author of the book, that it should be more carefully examined; and but natural for the reviewer to postpone the execution of an unwelcome and regretted labor.

If this work were simply an exposition of the author's views in regard to pathology, or therapeutics, or diagnosis, etc., an unwelcome review would have been given, as a matter of but little moment; an ordinary event indeed in Journalism; but when the author has sought to bring himself into public relations with the personnel of medical men; to act as the guide of the medical citizen, and the Mentor of the professional man, a review of such relations and such an adviser becomes inseparably personal in character, and is by so much to be naturally avoided; or at least postponed.

The book has however been twice sent, and it would now be (however disagreeable the task), weakness to postpone its review; it would also be unjust to the public, to the author, and to this Journal. Indeed the book has been so inordinately praised, that if harsh and unwelcome criticism be just, it is now all the more demanded.

The first title given to this book by the author, "The Physician Himself, and What He Should Add to the Strictly Scientific," was manifestly incorrect; it did not convey the meaning the author intended it to convey. It really means that the book is indicative of what the physician should contribute to science; while the author meant that his book should indicate what each physician should add to his own acquirements in science. He practically admits this error in the change of title adopted in the second edition. This is a minor matter, so it is very naturally noticed immediately after announcing the new title.

It is a pleasure to find, throughout this whole volume that its author has the highest possible admiration and appreciation of the thoroughly scientific physician. No one can surpass him in this respect, and no one has made such admiration more prominent, or expressed it in better and more welcome language. In this respect the lesson conveyed is beyond criticism. He does not however undertake to improve the scientific acquirements of the profession. This he leaves, as he says, to others. What he selects as his province and duty in part is to indicate the necessity for acquirements not scientific in nature, but essential (or deemed by him essential) for the success of the physician. He asserts the truism, that very many thoroughly scientific physicians fail to achieve success; and he proposes to analyze the reasons for this failure; and having ascertained the causes, to indicate these for the benefit of the profession.

These causes are, as might be anticipated, personal in nature; and the author, therefore, comes very naturally and necessarily, to deal with those defects or deficiencies in personal or professional deportment which are, in his judgment, the causes of the failure of so many of his medical brethren. It is proper then to call attention to his views and advice in regard to these causes.

His knowledge of human nature is often wonderful; it is always great; and his close study of the weaknesses and foibles of the sick, and of the methods of *individually profiting by them are strikingly and painfully conspicuous.* His advice is usually good, but his motives as a rule for such advice are justly to be severely reprehended; to be condemed in the strongest terms possible.

But these criticisms to be regarded as just, must have the reasons for them more clearly presented.

The physician is enjoined to be clean and neat; if not in clothing that is unseen, at least he is to "wear a clean shirt and collar;" not because it is disreputable and reprehensible to be dirty and unclean, but because "people will employ you more readily, accord you more confidence, *expect a larger bill and will pay it more willingly*" *!!!* This is the language and policy one would expect from a Mephistopheles; certainly not from a gentleman and physician. The advice is good, but the motive is vile.

Flowers and bouquets about the office and person are commended. Not because of their purity and aroma and associations, but because "they denote culture and a refined taste, and so aid their purchasers."

Political and religious emblems and portraits exposed, are condemned; not from any reason or principle, but because "they would surely be repugnant to some," and so diminish receipts. Is a man because he becomes a physician to become a demagogue; to conceal his convictions and tastes; and to sacrifice his independence?

"The physician," says the author, "is judged by the company he keeps. Avoid those who are under a cloud, or whose hopes and ambition are blighted." That one should avoid the company of the bad is advice that all will commend, because of its debasing and morally degrading effects; but to do this for pecuniary reasons is a novel philosophy. That "one whose hopes and ambition are blighted" should be avoided is advice not only unmanly, but it is cruel and brutal. That an unfortunate should be "cut," simply because association with him might be personally or pecuniarily injurious is advice so outraging to every sense of justice, and sympathy, and kindness, and manliness in the heart of a true and brave man, that language is powerless to adequately condemn it. How far more natural and proper would it be to advise that the cause of misfortune should be first learned, and then, if possible, to give to the unfortunate all the aid and comfort that true manliness would suggest. But even if one be for cause "under a cloud," to shun him, to avoid him, to repudiate him is strange advice to give where the creed of either manliness or Christianity is admired.

In regard to a physician's advising young men who ask advice in regard to studying medicine, the author says; "do not induce young men to study medicine; either their success or failure may work an injury to yourself." That is to say, if the young man studies and succeeds, his income, by something, or by some cents, lessens the income of the adviser. If he fails, the adviser will be blamed. It is difficult to know which to more censure here; cowardice or cupidity.

In regard to the arrangement of an office the author writes as follows:

"It is not unprofessional to keep at hand your library, microscope, and other aids to precision; also your diplomas, certificates of society membership, pictures of eminent professional friends and teachers, anatomical plates, or anything else that has associations in your mind : but it is better to have such only as have relation to you as a student or as a physician. Professional relics and keepsakes whose history is connected with your medical studies, such as the human skeleton, either entire or in parts, pathological or anatomical specimens, and mementos of your dissections, are both appropriate and useful."

The display of instruments, diplomas, skeletons, "dissections," anatomical plates, etc., in an office has always been regarded as charlatanism indefensible and absolute, and it is not likely that such advice can escape condemnation among the best representatives of the profession.

Very many illustrations could be given of very reprehensible advice, but want of space prevents the execution of such an unwelcome duty.

How the Medical Press could have placed its seal of sanction and commendation on such a book is one of the many mysteries manifested by it; such a course is indeed incomprehensible and must serve to give to readers of such fulsome and foolish praises, a very low estimate of the morale of the Medical Press of this country.

It is not denied, that the author exhibits at times, a very high regard for what is best in the personal character and professional deportment of the physician, but such a fact only serves to make it more wonderful, that he could so far forget what is due to himself and to his readers, as to have given, so very frequently, advice which is absolutely abhorrent to every sense of justice and propriety; to every conviction of what is pure, and true and manly.

Those who follow his advice may succeed; perhaps, in an age wherein success is obtained and often respected where it is obtained even by disreputable methods, the followers of the author's teachings will succeed; but is this success worth having? Is it indeed to be properly termed success, when a physician gets wealth and notoriety and practice, but at the expense of his own esteem, and with a forfeiture of the respect of the best and true men in his profession? Is this success? How far better is it, that the scientific physician should fail. (tried by the author's published standard and test,) than that he should obtain wealth and practice, at the expense of his own self-respect, and his convictions of all that is true and right,

The estimate formed of the general tone of the American Profession is so high, as to lead to the conviction that this profession will never sanction or sustain a work whose pages are stained by advice so reprehensible and unworthy. Such is the painful conviction in regard to this work, so far as it concerns the author; and such is the absolute conviction in regard to it, so far as it concerns the final estimate of the Profession.

After so much that it is painful to write, and which, the duty of a Journalist alone has compelled the writing (in place of facile eulogy and popular praise,) it is a pleasure to say that this work contains, with what has been condemned, much that is good and noble and exalted. And one can not but believe and hope that in all of this, the writer's true character shines forth; while to secure "success" for his readers, he has stooped to advise them to play the despicable role of a professional Joseph Surface; to be outwardly all that is proper, and plausible, and popular, but, like Joseph, to be at heart hollow, and deceptive, and base.

That many have read a book and seek to

read a book which tells them how to win a race, and such a race as that for professional success, is but an evidence of human nature; but that many will accept this book and commend it, can never be believed.

The Queen of Navarre insisted on seeing "the poor Troubadour; because," said she, "he is the oracle that can tell Nations I am beautiful." She saw him, but after seeing him, dismissed him. He could never be an associate, a companion or friend. This book offers to give more than the flattery of the Troubadour; it offers to give the golden secret of how to win money and success. But after every audience it secures with the noble and the true, it will share the fate of the Troubadour.

When a book contains, as this does, so much that is useful, and admirable and commendable, it is to be hoped that it will be, in future editions, fully expurgated; that its great errors of commission, will be thorough eliminated; and the book presented as an excellent guide to young physicians, and as a welcome and fit companion for those of maturer age.

SLIGHT AILMENTS: THEIR NATURE AND TREATMENT. By LIONEL S. BEALE, M.D., F. R. S., F.R.C.P., Professor of the Principles and Practice of Medicine in King's College, London, etc. Second Edition, Enlarged and Illustrated. Philadelphia. P. Blakiston, Son & Co. 1882. Pp. 283. Price: Paper, 75 cents; Cloth, $1.25; Extra, $1.75.

When the first edition of this work appeared, it met, deservedly, with a large sale. This edition is far better than the last, and the illustrations make it still more valuable. There are dozens of works in the physicians library telling him how to treat cases of acute disease, but how many has he which advise him as to the disposition to be made of cases of slight ailments; the malaise of society? What books teach the physician how to manage properly and intelligently cases of sick headache, vertigo, constipation, heartburn, neuralgia, colds, and the numerous minor evils which need treatment or relief, and yet are not accepted as worthy of serious notice in the text books?

Great attention is given to the changes of the tongue as indices of disease, actual and prospective. If the physician has not this work, he most probably has no friendly guide or assistant in the management of minor maladies. Apart from its scientific value, the work is written in a most entertaining and instructive style. It is well issued.

SORE THROAT; ITS NATURE, VARIETIES AND TREATMENT. INCLUDING THE CONNECTION BETWEEN AFFECTIONS OF THE THROAT AND OTHER DISEASES. By PROSSER JAMES, M. D., Physician to the Hospital for Diseases of the Throat and Chest. Fourth Edition. Enlarged. With Colored Plates and Engravings. "Hand-Book" Series. P. Blakiston, Son & Co. 12mo. pp. 318. Paper, 75 cents; Cloth, $1.25.

Many physicians recognize in this book one of the first, earliest and best authorities on the use of the laryngoscope. The specialist needs, of course, nothing simple and elementary on this subject, but the general practitioner will find in this volume exactly the aid and information he seeks, on this subject.

The author has written most happily and instructively on the various kinds and degrees of sore throat, and the reader obtains, by him, information which he may seek in vain elsewhere.

The anatomical descriptive in regard to the throat is most useful and excellent.

Those who use the atomizer will obtain great support and information in regard to it; and those who do not, must become converts after reading the author's testimony and experience. The various remedies and their mode of preparation are carefully given, the diction is clear, simple and intelligible, and the entire work is one that can be fully commended.

NITRO-GLYCERINE AS A REMEDY FOR ANGINA PECTORIS. By WM. MURRELL, M.D., M. R. C. P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Detroit, Mich. George S. Davis, Medical Publisher. 1882.

The Medical Journals for the past two years have contained many ephemeral and disjointed articles on this subject, and physicians have looked in vain for some systematic treatise which could be carefully and usefully studied. The author and publisher of this work, appreciating this fact, have furnished exactly what is at present wanted. The book is, though small, quite comprehensively written, and gives a great deal of valuable facts and information. All who wish to know the rationale and the success of using nitro-glycerine therapeutically should secure this volume.

A RATIONAL MATERIALISTIC DEFINITION OF INSANITY AND IMBECILITY. With the Medical Jurisprudence of Legal Criminality, founded upon Physiological, Psychological and Clinical Observations. By HENRY HOWARD, M.R.C.S., England, author of "Howard on the Anatomy, Physiology and Pathology of the Eye." Montreal: Dawson Brothers. 1882.

The author of this work by no means leans to the very absurd dicta respecting the value of the physical evidences of insanity which were promulgated in a well-known recent trial. Dr. Gray of Utica, for example, far exceeds Dr. Howard in his claims respecting the material nature of mind. Yet Dr. Gray declared that dementia was the only form of insanity which affords physical evidences. Dr. Howard leans to at what at first sight would appear to be the opposite extreme. He lays especial stress, for example, on the value of low temperature as a corroborative symptom of certain types of insanity. That certain forms of insanity show very low temperature cannot be denied. Lowenhard and Tenker, for example, have reported cases of insanity in which the temperature fell to 87.6° F. As a résumé of very sound views respecting the responsibility of the insane, the work is to be commended; more especially at the present time when unscientific cant is so prevelent. The medico-legal relations of epilepsy are very critically examined and a good idea given of the much ignored labors of Talret and Samt. To the general practitioner desirous of a good guide to a conscientious conclusion, the present volume is of decided value. The language is not stilted nor is there too great redundancy of technical terms. It has been very well issued by the publisher.

A MANUAL OF MIDWIFERY, INCLUDING THE SIGNS AND SYMPTOMS OF PREGNANCY, OBSTETRIC OPERATIONS, DISEASES OF THE PUERPERAL STATE, etc. etc. By Alfred Meadows, M. D. Third American, with additions from the Fourth London Edition. 145 illustrations. Octavo, 494 pp. P. Blakiston, Son & Co. Price, cloth, $2.00

The first edition of this well known manual was prepared for students exclusively. The present edition thoroughly revised and improved is prepared for both practitioners and students. It is not surpassed by any work of the kind now before the Profession. It is issued at a price which should place the work in every medical library.

The book opens with the physiology of conception and gestation, with the development of the ovum, the anatomy of the parts, etc., all treated in such a way that their leading features may be readily recalled. The second part includes the whole subject of pregnancy, its signs and symptoms, its duration, and the various deviations from what is termed normal pregnancy, as extra-uterine gestation and displacements of the gravid uterus. Part three considers natural parturition, the classification of labors, and the management of natural labor. The fourth part is devoted to obstetric operations necessitated by the different emergencies which constantly occur in practice.

The work is fully recommended.

ON OVARIAN AND UTERINE TUMORS; their Diagnosis and Treatment. By T. Spencer Wells, M. D. Octavo, 530 pp. 70 illustrations. P. Blakiston, Son & Co. Price, cloth, $7.00

This work includes most of all that the author has written upon this subject. It gives the experience of a fourth of a century and the results of nearly 1100 cases. As a summary of the author's views, and the views of those regarded by him with most favor, this volume must have a prompt and extensive sale. The illustrations (70) are generally excellent. They are all good. Such a work needs no criticism and no recommendation; and such eulogy is only justice.

AN INDEX OF COMPARATIVE THERAPEUTICS. With Tables of Differential Diagnosis, Dose Lists, and Memoranda Concerning Thermometry, Incompatibility of Medicines, Ethics, Anæsthetics, Fees, Asphyxia, etc. With full accounts of Homœopathic Pharmacology and Nomenclature. By SAMUEL O. L. POTTER, A. M., M. D. Second edition. 12mo, pp. 279. Gross & Delbridge. Cloth. Price $2.00.

The author of this work was a homœopath, but he has since abandoned his "faith," and graduated at the Jefferson Medical College. His entire fairness, and his competency for expressing disinterested opinions must be conceded. The diseases are presented in alphabetical order, and then he furnishes the description of medicines used by the different schools in separate columns. The work is carefully compiled and is a good work of reference. It is not likely to be generally purchased, but those who do will find it entertaining, curious and instructive.

SEA AIR AND SEA BATHING. By JOHN H. PACKARD, M. D., Surgeon to Episcopal Hospital. Philadelphia. Illustrated. 16mo, 124 pp. P. Blakiston. Price, cloth, 50; paper covers, 30 cents.

It is late to notice a book of this kind, but, in the interests of the public, it can safely be said, " better late than never."

The author has written sensibly. This manual does much to do away with the general but foolish idea that sea air and sea bathing are panaceas for " all the ills that flesh is heir to." He gives plain rules, in plain language, for the guidance of the public, and those who wish reliable advice on the subjects discussed will find it in this little volume.

SPECTACLES AND HOW TO CHOOSE THEM; AN ELEMENTARY MONOGRAPH. By C. H. VILAS, M. A., M. D., Professor of Diseases of the Eye and Ear in the Hahnemann Medical College and Hospital, Chicago. Illustrated. 12mo, 158 pp. Duncan Brothers. Cloth. Price, $1.00.

While orthodoxy in medicine cannot counsel any one to seek for guidance in therapeutics from a homœopathic adviser, the most bitter sectarian and schismatic would look in vain for false doctrines in this little monograph. It is homœopathic in design, scope, and results, and one can say of it, as the farmer did of the vicar's sermon, " There is enough of it. It's good enough, so far as it goes." No one wishes for more. For plain instruction, in simple language, this monograph will be instructive to those who know nothing of the subject, and care to know but little.

BOOKS AND PAMPHLETS RECEIVED.

How to Be Weather-Wise. By Isaac P. Noyes. New York. 1882.

The Application of Pressure in Diseases of the Uterus, etc. By V. H. Talliaferro, M.D. Atlanta, Ga. 1882.

Boletin De Ciencias Mèdicas Guadalajara. Mexico. August 1882.

The Columbus Medical College Imbroglio. From the Columbus Medical Journal.

The Examinations of A. M. Dent. By I. W. Hamilton, M.D., of Columbus, Ohio.

Lacerations of The Female Perineum. And Vesico Vaginal Fistulæ. By Dr. D. Hayes Agnew, M.D. Phila. 1882. P. Blakiston, Son & Co.

The Diseases of the Rectum. By William Allingham, M.D. T. R. C. S. P. Blakiston, Son & Co. Phila. 1882.

Sore Throat. By Prosser James, M.D. P. Blakiston, Son & Co. Phila. 1882.

From the Surgical to the Mechanical Act. C A. Frees. New York. 1882.

Transactions of the State Medical Society of Arkansas 1882.

Libraire De Bernardin. Bèchet. Paris. 1882.

Ten Years Experience in the Treatment of Stricture of the Urethra by Electrolysis. By Robert Newman, M.D. New York. 1882.

Removal of the Duty on Books. E. Steiger. New York. 1882.

Index Catalogue of the Library of the Surgeon General's Office, U.S.A. Washington. 1882.

Transactions of the State Medical Association of Mississippi. 1882.

Transactions of the Medical Association of South Carolina. 1882.

Transactions of the Medical Society of West Virginia. 1882.

Life of John M. Briggs of Kentucky, by W. K. Bowling, M.D.

National Club List 1879. Geo. A. Green, P.M. Andover, N. Y.

The Malignity of Syphilis. By L. Duncan Bulkley, A.M., M.D. New York.

Tate. Epsom Spring. Grainger Co., Tenn.

The Antiseptic Treatment of Wounds after Operations and Injuries, by W. T. Briggs, M.D. Nashville, Tenn.

Annual Announcement of the Toronto School of Medicine. Toronto, Ont., Canada.

Journal of Cutaneous and Vernereal Diseases by H. G. Piffard, A.M., M.D. and Prince A. Morrow, A.M. M.D. New York.

Treatment of Arthritis of the Temporo-Maxillar Articulation. By D. H. Goodwillie, M.D. D.D.S. New York.

Furnace for Privies. W. S. Ross. Kentucky. 1882.

First Biennial Report of the Free Eye and Ear Infirmary. Michigan 1882.

Report of the Board of Managers of the American Hosp'tal for Skin Diseases. Philadelphia, Pa. 1882.

Genius Breastless. An Ode. By J. J. Caldwell, M.D. 1882.

An Old System and a New Science. By F. E. Stewart, Ph.G., M.D. Detroit, Michigan. 1882.

The Columbus Medical College Imbroglio. Columbus Medical Journal. Columbus, Ohio. 1882.

A Reply to Dr. Foster Platt's Paper on the Legal Responsibility of Surgeons for Ununited Fractures. By Dr. Donald Maclean, M.D. Ann Arbor, Michigan. 1882.

On the Nomenclature and Classification of Diseases of the Skin. By L. Duncan Bulkley, M.D. New York. 1882.

The Function of the Intestinal Juice. By Ch. L. Dana, A.M., M.D. New York. 1882.

The Multum In Parvo Reference and Dose Book. By C. Henri Leonard, M.A., M.D. Detroit. 1882.

Eureka—The Epitome. A Monthly Medical Journal. Vol. 1, No. 1. C. T. Kirk, M.D., Editor. Meridian, Miss.

Duration of the Period of Incubation of Infectious Diseases. By F. Peyre Porcher, M.D. Charleston, S. C. From Transactions of S. C. Medical Association. 1882.

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MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

WHAT CHURCH IS IT?—Mr. Geo. C. Booth recently said that "the wealthiest and most prominent church corporation in New York City has scores of tenement houses which are in a most foul condition, and that the church corporation exacted last May ten and fifteen per cent. increase of rent under pain of eviction, instead of spending some thousands out of its millions in remedying such monstrous evils."—*Medical News.*

DIVORCED ON ACCOUNT OF A PERSISTENT HICCOUGH.—Dr. Pollak, at a recent meeting of the St. Louis Medical Society, related a case of persistent hiccough which lasted for twenty years and resisted all treatment. The patient was a lady, and her husband was compelled to get a divorce from her. He could not sleep with her, and it was most unpleasant. The woman was apparently strong and healthy.

TRANSFUSION IN THE SEVENTEENTH CENTURY.—A curious account of the difficulties of a transfusionist of the seventeenth century has been disinterred by the *Union Medicale* from the "Mémoires of Bouteillier d'Ardenay" published in the year 1670. A certain Dr. Denys, of the University of Rheims, who was, moreover, engaged in teaching mathematics in Paris, had a high opinion of the therapeutic value of transfusion; and one day, seeing a young man running naked through the streets in a state of "dementia," tried the remedy upon him with great success. The patient regained his senses and continued well for two months, but then relapsed into the same dementia. Denys a second time transfused some calf's blood, which he always employed. The patient this time was improved only, and not cured. At the end of a few weeks he lost his senses entirely, and was again brought by his wife to Denys, with the request that he would once more employ his sovereign remedy. Denys hesitated on account of the man's weakness, but yielded to the wife's solicitations. During the operation, as soon as the blood of the animal began to flow through the veins, the patient suffered such insupportable torments that Denys was obliged to desist. The man died six hours afterward, on which the grateful widow sued Denys for damages for having killed her husband. Denys, however, brought a reciprocal action against the widow on the grounds that she had attempted to poison him. At the trial the judgment went in favor of the widow. Appeal followed appeal, and the case ultimately went up to parliament, where it was pleaded by eminent counsel for the widow and for a Paris surgeon, who was involved in the proceedings on the ground that he had assisted Denys. The latter pleaded his own cause in Latin with great ability. The case seems ultimately to have been discharged, but an edict was issued forbidding the practice of transfusion under pain of corporal punishment.—*Lancet.*

ISOLATION IN CONTAGIOUS DISEASES.—At a recent meeting of the Académie de Médecine, M. Hillairet read a report prepared in answer to a question asked by the Minister of Public Instruction, regarding the length of time a pupil affected with any of the contagious diseases should remain separated from the other pupils. M. Hillairet's report may be summed up in the following propositions:

1st. Pupils suffering from varicella, small-pox, measles, mumps, or diphtheria should be completely isolated and hold absolutely no communication with the other members of the school. 2d. Isolation should continue forty days for small-pox, measles, scarlatina, and diphtheria; twenty-five days for varicella and mumps; the patient should have repeated baths before being allowed to join his comrades. 3d. The clothes worn by the patient at the time he fell sick should be submitted to a heat of 90° C., and then to repeated fumigations of sulphur. 4th. The bed clothes, curtains, carpets, furniture, and even the walls of the room occupied should be carefully disinfected, washed and aired. 5th. If the pupil is taken sick at home he should not be allowed to return to school without the certificate of a physician attesting that all these precautions have been faithfully carried out.

FERRUGINOUS LIVERS.—The presence of an excess of iron in the livers of anæmic patients is a curious fact, of which several instances have been described in Germany. One case was described by Stahel; and Lindenlang, in the liver of a patient with purpura, found a considerable excess of iron. Marchand has lately described the liver of a phthisical patient, aged sixty years, which presented an unusual brownish-red color associated with evident cirrhosis. The microscope showed an infiltration of the hepatic cells and of the interstitial connective tissue by pigmentary corpuscles, which gave the characteristic test for iron with yellow ferrocyanide. A chemical analysis showed that the ashes contained not less than 30 per cent. of iron. It has been supposed that the excess of iron is the result of an abnormal destruction of red blood-corpuscles in the organ, but it is open to question whether it is more than the result of the free administration of iron by the mouth.

THE PASSAGE OF DRUGS THROUGH THE LIVER.—Experiments have been made by Peiper on dogs provided with a biliary fistula, to ascertain whether certain drugs introduced into the alimentary canal reach the liver. In order to avoid the action of the gastric juice on the substances employed, they were injected into the bowel. If iodide of potassium were injected, a long interval (six or eight hours) was found to elapse before its presence could be discovered in the bile. Salicylic acid, given in an aqueous solution, of the strength of 1 to 300, could not be discovered in the bile, but if a more concentrated solution were employed its presence was evident at the end of half an hour. Carbolic acid seems to pass through the liver only in extremely small quantities. Both ferrocyanide of potassium and cyanide of potassium gave only negative results, although the former was found by Claude Bernard in the bile of animals after he had injected it into the veins.

THE PROGRESS OF CREMATION.—The President of the New York Cremation Society states that organized cremation societies exist in Italy, at Milan, Udine, Cremona, Como, Rome, Bologna, Pavia, Codogna, Padua, Genoa, Turin, Modena, Florence, Venice, Ancona, Novara, Brescia, Leghorn, Pisa, Placentia, and Parma. The subscribing members of these societies number upward of 5,000. At Lodi optional cremation is made an official sanitary institution by the municipal authorities, and so has outgrown all need of an organized society. There are also corresponding commissions to propagate the principles of cremation at Asti, Mantua, Vicenza, Reggio, and Carpi—in all, twenty-two societies and five propagating commissions.

There are established and in practical operation crematories at Milan (two), Lodi, Cremona, and Varese. There is in process of building a crematory at Rome; and it is reported that crematories are about to be built at Turin, Como, Brescia, and Padua. The actual number of crematories of human bodies at points named have been, down to the end of June, 1882: At Milan, 196; at Lodi, 20; at Cremona, 3—making a total in Italy of 219. At Gotha there have been 69 cases. In this country there have been 20, of which 14 were in the Le Moyne furnace.

The inventors and patentees of crematory apparatus are Gorini, Brunetti, Polli, Clericetti, Terruzzi, Betti, and Venini, of Italy, and Siemens, of Berlin, Dresden, and Gotha.

Gorini furnaces have been set up at Lodi, Milan, Varese, Cremona, Rome, and London, and they are preferred because adapted to any kind of light and inexpensive fuel. Siemens' method, however, has the preference of all scientific experts, as being most rapid and perfect in its work, though a trifle greater in cost than the Gorini method.

The New York Society are confident that a crematory will soon be erected near this city.

MICA FACE MASKS.—It is reported that the mica face masks made by Herr Raphael, in Breslau, are proving very beneficial to workmen exposed to great heat, acid fumes, flying sparks, or fragments of stone or metal. The mica plates are fixed in metallic frames, protected with asbestos. The masks cover the eyes more effectively than mica spectacles do, and the whole face as well. The neck and shoulder may at the same time be protected by a fireproof cape of asbestos or other proper material. The space between the masks and the face allows the use of inner glasses for improving vision or shading the eyes. The tough and flexible mica prevents the breaking of the glasses by heat or flying fragments.

TRICHINAE IN ADIPOSE ISSUE.—It has been generally assumed that trichinæ occur only in the muscular substance, and are not found in the fatty tissue. Chatin's latest investigations have, however, shown that trichinæ occur uniformly in the latter, where the parasites are free or only loosely connected with the neighboring tissue elements. Their nature may readily be mistaken, but is shown by the simultaneous occurrence of encapsuled trichinæ in the muscular tissue. Experiments proved that animals fed with trichinous fat exhibited no indications of trichinosis, while others fed with the flesh from the same infected animal quickly suffered and died with symptoms of intestinal trichinosis; although further observations on the comparative innocuity of the fat must be made before the fact can be regarded as of hygienic importance. The practical value of the discovery at present seems to be that the fat, as well as the flesh, of suspected animals should be examined.

THE PRACTICE OF MEDICINE.—It is remarkable and worth telling that the State Board of Health has had trouble in but *three* cases among the thousand and sixty applicants for medical certificate. Indeed, nothing could work more smoothly than that part of the machinery of the law regulating the practice of medicine and surgery, for it has the hearty support of every respectable physician in the State, and all are proud of our rising professional standard!

The new manner of dealing with itinerant physicians has not only put several hundred dollars into the State treasury, but prevented the incursions of a class of ignorant pretenders who, previous to the passage of the law, regularly occupied West Virginia to humbug credulous people.

It is the duty of every legally qualified physician to keep close watch for all violations of the law, and when offences are discovered, to report them promptly to the prosecuting attorney or to a justice of the peace.

Section 14 makes it the duty of the sheriff to collect the "special tax of $50 for each month and fraction of a month" from all *itinerant physicians*, of whatever name or character, "who shall travel from place to place, and by writing, printing or otherwise, publicly profess to cure or treat diseases, injuries or deformities." Any person is regarded as practicing medicine within the meaning of the law "who shall publicly profess to be a physician, and to prescribe for the sick, or who shall append to his name the letters M. D."

The act also applies "to druggists and pharmacists who prescribe for the sick," and should be enforced against such offenders to the letter. Frequent complaints have reached the State Board of violation of the law by druggists and pharmacists, and there is good reason to believe that such offences, though not so common as before the passage of the law, are yet of frequent occurrence in many of our large towns. By all proper means, such offenders should be discovered, and the information given to the prosecuting attorney or a justice of the peace.

Finally: The law requires that all persons engaged in the practice of medicine and surgery in West Virginia shall have a certificate from the State Board of Health. There are three classes of certificates: 1st, the diploma class; 2d, the ten years' experience class; 3d, the examination class. "Itinerant physicians" must possess the qualification of one or the other of these classes before offering to engage in general practice or to prosecute a specialty; and unless they first so provide themselves with a medical certificate from the State Board they become offenders in a *double sense* and liable to the severest penalties of law.—*Ext. Circular from State Board of Health, W. Va.*

Gastric Ulcer. — Dr. L. Galliard (Journal de Mèdec ne de Bourdeaux,) comes to the following conclusions: Simple or perforating gastric ulcer is not a specific affection, but owes its distinctive characteristics to the action of the gastric juice. It results from various causes. The three theories of its origin serve to explain certain cases. First: Rokitansky's theory of venous stasis explains hæmorrhagic erosions of the stomach. Second: Virchow's theory of thrombosis or embolism causing obstruction to the arterial circulation, explains the existence of certain large and spreading ulcers and, probably, also the presence of certain latent ulcers. Third: Cruveilhiers's theory of gastric inflammation serves to explain the origin of the vast majority of gastric ulcers, and, according to Dr. Galliard, has much clinical and pathological evidence in its favor.

Communication of the Lung with the Aorta.—Dr. Bohay presented to the Medical Society of Buda-Pesth, the specimens obtained from a case of phthisis pulmonalis, in which the cavity in the apex of the left lung communicated by an opening four millimetres in diameter with the left side of the arch of the aorta, which was as thin as paper and drawn over to the eft side by adhesions to the lung. The aneurism was not diagnosticated during life. Such cases are extremly rare, Rokitansky having only seen one similar one—*Journ. de Mèd. de Paris.*

Cigarettes—It is a fact not disputed that the majority of cigarettes are not only made of the most inferior tobacco, cigar stumps from syphilitic mouths and filthy gutters, but that both paper and tobacco do contain much poisonous drug adulteration. —*Med. and Surg. Reporter.*

Electric Lights in Sea Fishing.—A French paper reports a trial by government permission of an electric lure for sea fish. It consists of an electric light in a glass globe with a device for sinking it to the desired depth. As soon as the light is turned on the sea in its vicinity is illuminated brilliantly, and the fish, over whom light is well known to exercise an irresistible influence at night, come eagerly, and sometimes in large schools, within the rays. They may be seen from above disporting themselves in the unaccustomed brightness, and little dreaming of the sinister purpose with which the little fete is organized for them. It is then that other fishing boats, armed with nets, come up and set to work at the unconscious victims, which they surround as well as they can without interfering with the apparatus connected with the lighted globe.

Cleaning Horses by Steam.—In the stables of the Third Avenue Railroad in New York, a machine worked by steam has superseded the curry comb. Its regular rate is ten horses an hour, but, in testing its speed the other day, one horse was actually cleaned in one minute and fifteen seconds, and more thoroughly than by the ordinary process. The horse is led under a bar, from which depend on each side of him arms with universal joints. Turning on the arms are brushes a foot in circumference. These are revolved by steam through the arms and cross-bar at an ordinary rate of 800 revolutions a minute, which can be increased to 1,000. A man on each side takes hold of the arm close to the brush, and applies the brush to the horse. The steam that whirls the brush makes a noise a good deal like the hissing of a hostler. The universal joints allow the arms and brushes to be moved in any direction. Beginning at the head, the men move the brush along the sides, back, and belly, and down the legs of the horse to the feet. A cloud of dust arises in the air, and in two minutes the horse looks like a different creature. The horses were a little nervous at first, but after a few seconds all appeared to be pleased with the operation. At the Third Avenue Railroad stables it takes six men thirteen and a half hours to clean, or half clean, 128 horses by the ordinary process. If the steam-brush is passed over the horse at a moderate speed once, each square inch is actually brushed more than if an ordinary brush had been passed over it 400 times.

PULVIS DOVERI.—People whose "inward griefs and peristaltic woes" have been relieved by the powder of Dover, do not generally know to whom they are indebted for this excellent compound. Doctor Dover was a friend and probably pupil of the great Sydenham. He commenced practice in Bristol, where having made some money, he longed to make more. The Roll of the College of Physicians tells us that he joined with some merchants in fitting out two privateers for the South Seas, in one of which, the "Duee," he himself sailed from Bristol 2nd August, 1708. On the passage out they touched at the Island of Juan Fernandez, where Dover on the 2nd February, 1708-9 found Alexander Selkirk, who had been alone on the island for four years and four months, and whom Dover brought away in the "Duke." In the April following Dover took Ginaguil, a city or town of Peru, by storm. In December, 1709, the two privateers took a large and valuable prize, a ship of 20 guns and 190 men, in which Dover removed from the "Duke," taking Selkirk with him as master, and finally reaching England in October, 1711. After this cruise Dr. Dover removed to London, where his practice soon became great. his patients, and the apothecaries who wished to consult him, addressed their letters to the Jerusalem coffee house, where at certain hours of the day he received most of his patients.—*Chicago Rev.*

RED SNOW.—At a recent meeting of the San Francisco Microscopical Society, Dr. Harkness presented a bottle of "red snow," which he gathered last June on the Wasatch Mountains. The red snow was found on the north side of a spur which rose about 10,000 feet above the sea level. When fresh, the snow has the appearance of being drenched with blood, as though some large animal had been killed. The "red snow" is caused by the presence of a one-celled plant called *Protococcus nivalis,* which reproduces itself by subdivision; that is, the cell divides itself into several new cells. This is done with great rapidity, and a few cells lodged in the snow, under favorable conditions, soon will give it the appearance called "red snow." It was remarked that the phenomenon of red snow had been observed from the earliest times, as Aristotle has a passage which is thought to refer to it.

The subject was, however, lost sight of until brought up by the investigations of Saussure, who found it on the Alps in 1760. He made chemical tests which showed him that the red color was due to the presence of vegetable matter, which he supposed might be the pollen of some plant. In 1819, an Arctic expedition under Captain Ross brought some specimens from the cliffs around Baffin's Bay, and they were examined by eminent botanists, some of whom mistook the nature of the plant, and there was long discussion as to its proper classification, some holding it to be a fungus, some a lichen; but it was finally set at rest as one of the unicellular algæ. It is of interest also that some of the early examiners pronounced the color due to animalcules, but this was disproved. Dr. Harkness said that during his last visit to England he saw the original bottle of specimens brought from the Arctic more than sixty years before, and in which the *protococcus* could still be seen with the naked eye.

ACONITE IN DYSENTERY.—Dr. Owen reports the results of one hundred and fifty-one cases of *acute dysentery treated with aconite.* He was induced to look about for another treatment than the conventional one with ipecac, on account of the nausea which often attends the latter, and which often drives hospital patients, especially, to rebel against a repetition of the dose. Dr. Owen gave the tincture of the British pharmacopœia, which is of one-sixth the strength of Fleming's tincture. He gave one minim every fifteen minutes for the first two hours; after that, one minim every hour. This would make thirty minims in twenty-four hours. Dr. Owen feels that his experience in one hundred and fifty-one cases justifies him in speaking quite positively in favor of the treatment. In his paper he gives a very good analysis of his results.—*N. Y. Med. Journ.*

THE TREATMENT OF ENLARGEMENT OF THE SPLEEN.—Injection of drugs into the substance of the spleen has been lately tried as a means of obtaining a reduction of the bulk of the organ in cases of hypertrophy. Hammond obtained a rapid reduction in size by the injection of ergot. Kussmaul, of Strasburg, endeavored to lessen the size of the organ by simple puncture with a large needle, hoping thus to produce a hæmorrhagic infarct which might cause some atrophic shrinking, and by repetitions of the process a considerable reduction in size of the organ. The result, however, disappointed his expectation, for no marked effect was produced by fourteen punctures. Galvano-puncture was tried four times, with no better result. A parenchymatous injection of .1 gramme of sclerotic acid was made, and death followed in six hours. At the autopsy, no trace of hæmorrhagic infarct could be found in the organ; only around one of the punctures was there a reddish zone. The patient was suffering from leucocythæmia, and, whether death was caused by the sclerotic acid or not, the lesson is certainly taught that injections should be made into the substance of the spleen in that disease with extreme caution. Mosler, of Griefswald, has tried injections in other forms of enlargement with success, but prefers Fowler's solution to ergot, and has found those cases most suitable in which the spleen is hard. He thinks it well, also, to apply ice to the splenic region for some hours before an injection is given. A remarkably good result has been reported by a St. Louis physician, Dr. Emanuel, of the internal use of ergot. The patient was a gentleman forty-three years of age, whose spleen was so much enlarged as to fill almost the whole of the abdominal cavity. It was firm and tender, and the patient affirmed that the swelling had existed for two weeks only. There was no history of malarial disease. Thirty drops of Squibb's extract of ergot were given three times a day, and the dose gradually increased to sixty drops. In three days the spleen had lost much of its hardness, although its size remained nearly the same. A week later, however, it was distinctly smaller; every day the diminution went on, and in a few days more the spleen was reduced to nearly the normal size.

TREATMENT OF ABSCESS OF THE LIVER BY LARGE OPENING.—At the meeting of the Académie de Médecine held October 3, 1882, M. J. Rochard referred to a communication which he had made in October, 1880, in reference to the method of treating abscess of the liver employed by the physicians of Shanghai ; the method consists in freely opening the abscess after the diagnosis has been confirmed by an exploratory puncture, using the needle as a director to the incision, and then employing Lister's method of dressings. Since then M. Rochard has received numerous communications which have served to strengthen his confidence in the value of this plan of treating hepatic abscess, among others, two recent cases, Of these, the first was a mulatto aged 23 years operated upon by Dr. Scotland, nearly two litres of pus being drawn off; improvement was immediate and cure rapid. The second case occurred under the care of Dr. Bernard in a girl aged 19 years, in whom free incision was employed after aspiration had failed to give any relief; a cure also resulted in this case.—*Gaz. Médicale de Paris.*

DOMESTICITY AS A CAUSE OF INSANITY.—Mrs. M——, aged forty-four, mother of eight children, acute mania. The husband, when asked if he could suggest any cause for her illness, exclaimed with much animation that he could not conceive any reason. "She is a most domestic woman; is always doing something for her children, is *always* at work for us all; *never* goes out of the house, even to church on Sunday; never goes gadding about at the neighbor's houses, or talking from one to another; has been one of the best of wives and mothers, and was *always* at home." The superintendent, in commenting on this case, says: "This appreciative husband could hardly have furnished a more graphic delineation of the causes of his wife's insanity, had he understood them never so thoroughly."—*Report of Hartford Retreat for Insane.*

AN IMPROBABLE INTERVIEW WITH MRS. LANGTRY.—It is rumored that Mrs. Langtry the English beauty has has been interviewed by a medical reporter. She said that she was not a homœopathist, as has been stated; she believed in the New York code, however. Her impressions of American medical men have so far been very favorable, and confirmed previous anticipations formed by a constant reading of *The Medical Record.* The branch of medicine in which she had been chiefly interested was dermatology, as in this America easily led the world, and she was sorry she could not have got over in time for the Newport meeting of the Association. She attributed the beauty of her complexion to a constant study of American dermatological literature.

Mrs. Langtry was hardly prepared to give her opinion of Post-Graduate Schools, but thought they were very nice. She would send tickets, she said, to any doctors not connected with some medical school—it seemed such a pity. The reporter told her, however, that there were none such.

Mrs. Langtry asked about our insane asylums, and strongly urged the use of the tight-fitting jacket known as the ' Jersey," as a substitute for camisoles and straight-jackets and ducking.—*Record.*

IPECACUANHA IN DYSENTERY.—An increasing professional experience in the use of ipecacuanha in dysentery amply confirms the original statements as to its very special value. There is however, a singular lack of appreciation of its curative effects, and an unwillingness on the part of many physicians to give the remedy in sufficient quantity. To cure dysentery with ipecacuanha, its purgative effects must be induced, and for this it must be taken in quantity. It has been found that from a scruple to a drachm every four hours, until the characteristic stools are produced, is the amount necessary. How to secure the retention of such a quantity by the stomach is a vexatious problem. Combination with aromatic powder sometimes suffices, and this should not be neglected in any case. The conjoint admistration of carbolic acid and bismuth will diminish the irritability of the stomach. The powder is best swallowed mixed in milk. A mustard plaster should be previously applied to the epigastrium, and some bits of ice allowed to melt on the tongue until the nausea ceases. If rejected several times, tolerance is established, when the maximum doses will be retained. When the "ipecacuanha stools," as their peculiarity entitles them to be called, are passed, astringents complete the cure.—*Philadelphia Med. News.*

ALBUMEN IN COWS' MILK.—Dr. Schmidt, Mülheim, has been investigating the nitrogenous bodies in cows' milk, about which so much diversity of opinion has hitherto prevailed. He says that three albuminoid substances are regularly present in the milk, viz.: caseine, albumen, and pepton. The average of seven analyses gave 2.43 per cent. caseine, 0.38 per cent. of albumen, and 0.13 per cent. of peptons. Under certain circumstances the amount of albumen may increase until it equals that of the albumen. The pepton is formed from the caseine by a fermentative process; this ferment is destroyed by a boiling temperature, but its activity is not destroyed by salicylic or carbolic acid, so that in this respect it resembles the ferment that digests the albuminoids. Since milk, on long standing, may lose 10 per cent. or more of its caseine by its conversion into peptons, it should be made use of as fresh as possible when employed for nutrition.

REMOVAL OF PLASTER-OF-PARIS BANDAGES.—Dr. F. H. Murdock, of Bradford, Pa., says: A very convenient way to remove plaster-of-Paris bandage is as follows: Take a strong solution of nitric acid, and by means of a camel-hair pencil paint a strip across the bandage at the most desirable point for division. The acid will so soften the plaster that it may be readily divided by means of an ordinary jack-knife.—*Nashville Journal of Medicine and Surgery.*

A POISON FOR TUBERCULAR BACTERIA.—A paper was recently communicated to the Paris Académie des Sciences, by M. De Korab, on the action of helenine on the bacteria of tuberculosis. The facts mentioned deserve notice, although we fear that the hopes suggested are too bright to be realized. The bacilli were cultivated in bovine blood serum, which was daily heated for a week to effectually sterilize it, and was then coagulated by a temperature of 65° C. A guinea-pig having been rendered tubercular by inoculation and inhalation, small tubercular masses were taken from it, introduced into ten tubes containing the tubercular serum, and the tubes plugged after some helenine had been poured into three of the tubes. All were kept at a temperature of 37° C. for a week, and at the end of that time inoculation experiments showed that the organism in the tubes to which the helenine had been added no longer caused tuberculosis, which was readily produced by the contents of the other tubes.

SUTURE OF TENDON.—Dr. Yeats recently presented a case to the Manchester Medical Society (*British Medical Journal*) where he had, six weeks after an accident, united with four catgut sutures the divided ends of the tendon of the extensor communis digitorum of the middle finger, at the metacarpo phalangeal joint. The shin wound was united by silver sutures. The operation was done antiseptically. The wound healed in four days; and three weeks afterward the patient had perfect control over her fingers, flexion and extension being perfect. At the end of five months the fingers were as strong and useful as before the operation.

NERVE - STRETCHING — URETER-STRETCHING.—The *London Medical Record* quotes from the *Deutsch Med. Wochenschrift* a letter which gives a "fling" at the nerve-stretchers. The writer speaks of ureter-stretching for granular kidney. He has also stretched the hepatic duct for cirrhosis, and intends to stretch not only the pneumogastric nerves, but also the bronchi for chronic contraction of the lung. He also asks, "Might not general paralysis of the insane be cured by simple extraction of the teeth and stretching of the respective twigs of the dental nerves? I will try it. A new era is dawning! Here is, indeed, an art, and, while we live, let us stretch!"

VEGETABLE BUTTER.—N. Jepson, an English negetarian, not wishing to use poor and adulterated animal fats, has sought a substitute, and found it in a composition for which the following is the formula: Take four ounces of the finest Brazilian nuts, pounded very fine in a mortar; four ounces pure olive oil; rub them into a smooth jelly; add eight ounces of fine wheat flour and a quarter of an ounce of salt. Rub the whole into a smooth paste, and use as butter. This would certainly be preferable to much that goes by the name of butter.

CHLORIDE NOT CHLORATE OF POTASSIUM is the specific for mecurial stomatitis. As pointed out by Professor Wertheim recently, the chlorate is very generally prescribed. The chloride can be used in saturated solution for the above trouble. It is less irritating than the chlorate.

THE VACATION OF A SUCCESSFUL PRACTITIONER.—Wife (to a doctor just home from a week's hunting): "Well, James, did you shoot anything." Doctor (sadly): "No; awfully bad luck; never killed a thing." Wife (who knows him, sweetly): "My dear, you would have done better if you had stayed at home." — *Medical Record.*

The Significance of Cerebral Asymmetry.—Dr. Layton quotes (*N. O. Medical and Surgical Journal*) the following from J. A. Fort's "Anatomie et Dissection": "Every one knows that after the death of the celebrated Bichat, one hemisphere was discovered to be in a state of almost complete atrophy, which appeared to be by no means of recent origin. Who would venture to deny the mental capacity of the illustrious anatomist, his lively imagination, and that spirit of generalization which has immortalized his name?"

A Difficulty Solved.—Some years since, and before the observance of the law requiring a return of births to be made to the bureau of vital statistics of Illinois had fallen into its present state of desuetude, it happened that a Cyprian, en route from Boston to her home in St. Louis, fell sick in Chicago, but not "of a fever." In her distress she sought relief from the attendance of an accoucheur, distinguished not less for his professional skill, than a conscientious and punctilious observance of every requirement of the laws. Under his care the patient was soon delivered of a fair plump baby. In the forms furnished the doctor by which he was to make return of the birth to the proper authority, was a blank, in which he was required explicitly to state who was the father of the child, and this gave him more trouble than did the forceps delivery. The uncertainty in the case threw him into a condition of great mental perturbation and distress from which he escaped, with entire satisfaction to his conscientious scruples, by writing in the certificate as the name of the father E. Pluribus Unum. This may serve as a useful hint to others in a like dilemma.—*Chicago Review.*

Curious Habits of Ants.—Sir John Lubbock's extraordinary book on "Ants Bees, and Wasps" will amaze readers. Fancy ants having slaves! Fancy these proverbial examples to the sluggard keeping certain insects as we keep cows, and building sheds over them, and keeping others as pets! The aristocracy of ants seem to have all the vices which brought antique monarchies to destruction. Sir John writes soberly, as a philosopher should, and weighs his words no doubt, which makes his conclusions the more astonishing. The author quotes some of Huber's experiments, the value of which he has himself tested. The bloated ant aristocrats, it is said, "have lost the greater part of their instincts ; their art, that is, the power of building; their domestic habits, for they show no care for their young, all this being done by the slaves ; their industry, for they take no part in providing the daily supplies ; if the colony changes the situation of its nest, the masters are all carried by the slaves on their backs to the new one ; nay, they have even lost the habit of feeding. Huber placed thirty of them with some larvæ and pupæ and a supply of honey in a box. 'At first' he says, 'they appeared to pay some little attention to the larvæ ; they carried them here and there, but presently replaced them. More than one-half of the Amazons died of hunger in less than two days. They had not even traced out a dwelling; and the few ants still in existence were languid and without strength. I commiserated their condition, and gave them one of their black companions. This individual, unassisted, established order, formed a chamber in the earth, gathered together the larvæ, extricated several young ants that were ready to quit the condition of pupæ, and preserved the life of the remaining Amazons.' This observation has been fully confirmed by other naturalists. However small the prison, however large the quantity of food, these stupid creatures will starve in the midst of plenty rather than feed themselves. . . . I have, however, kept isolated specimens for three months by giving them a slave for an hour or two a day to clean and feed them ; under these circumstances they remained in perfect health, while but for the slaves, they would have perished in two or three days."

MEDICAL NEWS.

" Nulla dies sine linea."

THE inauguration exercises of the New York Post-Graduate Medical School took place Nov. 4th, at 8 P. M. Dr. D. B. St. John Roosa, President of the Faculty, delivered the inaugural address, entitled " Medical New York: Old and New." The other regular speakers were Mayor Grace, the Rev. Henry C. Potter, D. D., Dr. J. Marion Sims, and the Hon. John Bigelow. The opening lecture of the first regular course will be delivered in the college building by Dr. J. L. Little, Professor of Clinical and Operative Surgery It will consist of a series of clinical demonstrations ; and this form of instruction will be adhered to in so far as it is practicable and desirable, in courses designed for Medical practitioners. The Profession generally, were invited to the inauguration exercises. The inaugural exercises were very successful and the addresses instructive and interesting.——Dr. J. Marion Sims sails for Europe next Saturday, Nov. 11th, to be gone nearly a twelvemonth. He is well but makes this change from prudential reasons.——Dr. J. Marion Sims, and his son, Dr. Harry Marion Sims, gave, at the Brunswick Hotel, N. Y., on the evening of Nov. 4th, a "reception" to Dr. S. D. Gross of Philadelphia, very many of the most eminent physicians of Boston, New York, Philadelphia, Baltimore, and the smaller cities more immediately adjacent to New York were present. The entire entertainment was unexceptionable and a source of much pleasure to all present. Dr. Sims bade adieu to his many friends to be absent until Oct.——A HORRIBLE TRAGEDY—On Monday, the 30th of October, Mrs. Seguin, the wife of Dr. E. C. Seguin, of this city, destroyed the lives of her three children, and then her own. She used the pistol in each case, having blindfolded each child and tied its hands behind its back with whip cord. This it is supposed was done to induce the children to believe that they were going to have a game of romps, or something of the kind. It was the merciful act of a mother conceived at that dread and awful moment. After shooting the children, the mother then shot herself. The deaths are believed to have been instantaneous and painless. The husband was not at home, and knew nothing of the overwhelming desolation which had swept over his home, until he returned in the afternoon. He has, it is needless to say, the universal sympathy of the Public and Profession, and needs certainly every support that friendship and sympathy can give in this most fearful and awful calamity. The coroner's jury, of course, assigned aberration of mind as the cause of this unparalleled tragedy; a tragedy which has no equal in the annals of literature.——MEDICAL BRAVERY.—The engagement at Kassassin, in the recent Anglo-Egyptian war, afforded two illustrations of the bravery of the army medical officesr, which are worthy of being recorded, especially as in the English army the surgeons are classed as " non-combatants," and are persistently denied their proper rank and recognition. The only officer who was killed on this occasion was Surgeon-Major George Shaw, who, for the purpose of rendering assistance to a wounded man, voluntarily exposed himself to a scathing fire from the enemy. He was struck in the temple by a rifle bullet, which penetrated and lodged in the brain, and lived only three hours in an unconscious state. During the same engagement some movement of troops left the first company of Army Hospital Corps in an isolated and dangerous position. The medical officer in charge refused to permit the work of dressing the wounded, many of whom needed instant attention, to be intermitted for a moment, and declined to make any change of position until that duty had been attended to. His men, some forty in number, accordingly filled their haversacks with sand, so as to form temporary breastworks, took the rifles of the wounded who were unable to use them, and defended their charge until the arrival of the cavalry terminated the enemy's attack.--*News*.——NOVEL FIRE ESCAPES.—The last invention for the protection of Theatre audiences is a "penetrable safety wall," which has just been patented by an engineer at Kottsbue, Germany. The plan is to make the interior wall in all parts of the theatre of papier maché, made after a certain method. Such a wall will have the appearance of massive stone, but by pressure upon certain parts where the words are to be painted in luminous letters, "To be broken open in case of fire," access to the exterior corridors is to be obtained, whence escape to the outer air can be made.——The Baltimore Eye, Ear, and Throat Charity Hospital has recently been fully established. It is well officered.——The Royal College of Physicians, London, England, has recently passed the following resolutions; Sir William Jenner presiding: "That the system of extensively advertising medical works in non-medical journals, and the custom of giving laudatory certificates of medicinal and other preparations, whether for publication or not, is misleading to the public, derogatory to the dignity of the profession, and contrary to the traditions and resolutions of the Royal College of Physicians." What Society in this country "has the back-bone" to do likewise?

AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine met in Philadelphia, October 26th and 27th. The annual address was read by the President, Professor Traill Green, A.M., M.D., LL.D., of Easton, Pa. He referred to the organization of the Academy in this city, six years ago. He said one of the greatest obstacles to the improvement of medical education in this country is the deficiency of sufficient preliminary education in those who enter the profession. The nominating committee presented a report, which was adopted, and the following officers were elected to serve the ensuing year: President, Dr. Henry O. Marcy, Massachusetts; Vice-Presidents, Drs. George M. Beard, New York; William Elmer, Bridgeton, New Jersey; Cornelius R. Agnew, New York; Thomas M. Drysdale, Philadelphia, Secretary and Treasurer, Dr. R. J. Dunglison, Philadelphia; Assistant Secretary, Dr. Charles McIntire, Jr., Easton, Pa.——The editorial management of the *Louisville Medical News* has been assumed by Drs. L. P. Yandell and L. S. McMurty, who succeed Drs. Holland and Cottell. They have the best wishes of this Journal for their success.——The use of the bicycle and tricycle has become quite the rage among prominent doctors in England, and the wheel is gaining some advocates here. Dr. A. W. Blythe gives a very interesting lecture in the *Boston Medical and Surgical Journal* on "Cycling," which deserves attention from those who practice in a level country. ——The first case of resection of the stomach performed in this country, was by Dr. F. W. Koehler, a homœopathic practitioner, of Louisville, Ky., on the 2d ult. The operation was perormed secundem artem, and the patient lived for five hours after its completion. This boldness is a new feature in homœopathic practice and it would not be surprising to hear of heroic medication after this hazardous use of the knife. Patient died.——The *Sanitarian* will appear on the first of next year as a weekly double column, quarto, 32 page paper. This admirable Journal is one of the necessary periodicals, and its more frequent visits will be appreciated by its large list of subscribers. Few men in America have done as much as Dr. A. N. Bell, its able and zealous editor, toward establishing a sanitary literature.——Dr. Bliss has appealed directly to the board of audit to be allowed $25,000 for his services as Mr. Garfield's physician. He claims his practice was worth $1,500 a month, and this was lost by reason of his attention to the President. If he was not more successful with his other patients than he was with the President, those who recovered because he had to leave them might feel like "chipping in" to help the government get rid of him.—*Daily News*.——Electricity is becoming a frequent cause of death. Two men, while attempting to climb the railing of the Tuileries gardens at Paris, during a display of fire-works, August 8th, caught hold of the electric wires used in illuminating the grounds, and both were struck dead instantly. Several deaths have occurred in American cities from the same cause.——The annual report of the Surgeon-General, U. S. Army, is a voluminous and interesting document.——The *American Journal of Physiology*, edited by D. H. Fernandes, M.D., Indianapolis, Ind., is received.

DARWIN'S STATUE.—Twelve thousand five hundred dollars have been already collected for the marble statue of Darwin, to be erected in the British Museum.——In Providence, R. I., with a population of 104,000, not a single death has occurred from small-pox since 1875. The reason is given as "general and careful vaccination."——At the jubilee held at the Wurzburg University, among the celebrities who received honorary degrees were Sir James Paget and Professor Huxley.——AMERICAN GYNECOLOGICAL ASSOCIATION.—The American Gynecological Association held its annual meeting in Boston, September 20, 21, and 22. The next session will commence in Philadelphia, on the third Tuesday in September, 1883.——DUBOURQUE'S VICTIM.—A post-mortem examination of the body of Mrs. Mary Hanley, of New York, who died from the stab wound inflicted by Dubourque, the crazy Frenchman, was made by Deputy Coroner Denlin. The compasses—the weapon used by the assassin—had penetrated the walls of the heart and had punctured the coronary artery, but when withdrawn had so twisted the latter that the flow of blood, which otherwise would have been instantaneous, was rendered impossible for the time being. In a few days, however, the artery came back to its natural position, and on the next afternoon secondary hæmorrhage set in, the blood bursting through the cut, filling the pericardium and causing almost immediate death. The case is regarded as a most extraordinary one, from the fact that death generally results in a few hours at the longest after wounds of that kind.——LONGEVITY OF AMERICAN DOCTORS.—At the annual meeting of the Massachusetts Medical Society, held in Boston last June, the Secretary read the names of Fellows deceased during the preceding year. They numbered thirty-three. Of these, thirteen had attained the age of sixty-five and upwards; nine were seventy and above; three were respectively eighty, eighty-one, and eighty-eight; while the Nestor, Dr. Ebeneezer Smith Phillips, admitted a Fellow in 1837, died the 28th of of last May, aged ninety.——A new Medical Society for the western suburbs of London has recently been formed. It is to be named the West London Medico-Chirurgical Society. The following officers have been elected for the first year: President, Dr. Edwart Hart Vinen; Vice-Presidents, Dr. Thudichum, Mr. B. J. Vernon, Mr. Hemming, and Mr. Frederick Lawrence; Treasurer, Mr. W. Bird; Council, Drs. Alderson, Pickett, Goddard Rogers, Sinclair Thompson, and W. Travis; Messrs. Alderton, Barnes, Lunn, Ottley, Potter, Walker, and Willing; Secretaries, Messrs. C. B. Keetley and F. F. Schacht.——COMPULSORY VACCINATION IN ZULU.—Our correspondent quotes the *Cape Mercury* as stating that the Zulu King Panda, twenty years ago, had himself and his son Cetawayo and all his subjects vaccinated by a medical man whom he sent for from Natal. We cannot despair of a royal family, even of savages, that can act with an enlightenment that would put to shame some of the members of our own House of Commons.–*Lancet*.—-SCHOOL HYGIENE.—Dr. T. J. Hoppel, in an article on this subject in the *Medical and Surgical Reporter*, gives the proper inclination of the desk for reading or any kind of study to be an angle of about 40° or 45°; for writing, not more than 20°. You can demonstrate this fact by having a child with a normal eye read from a book held to suit the eye, and you will find the angle formed by the book so held with a horizontal line to be about 40° or 45°. Follow nature in these matters. She is generally correct. A movable desk-lid, to fix at 29° for writing and 45° for other purposes would be a desideratum in our school rooms.

The oldest university of Gemany, Prague, has ceased to be a German university. The upper house in Vienna has passed a law, that from the first of October next the lectures must be given in the czechic language, and the examinations passed also be in the same tongue. This is, perhaps, the most foolish law ever passed by legislators. Who speaks or reads the czechic language? Besides Latin there are only three languages universally known—English, French and German. This decree will be the deathblow of Prague, of which some said that it was getting ahead. After the loss of Klebs and Eppinger, whom have they left?——An extensive manuscript relative to the brain, by Swedenborg, has been translated into English by Professor Tafel, and is now in course of publication, after lying in the library of the Royal Academy of Sciences of Stockholm for 140 years. It contains a copious summary of the literature of the brain down to Swedenborg's time, and then his analysis and theory of the facts. To this Professor Tafel has added an exhaustive account of the science of the brain to this day, together with many notes comparing modern science with Swedenborg's views.—*Register*.——LAWN TENNIS ARM.—For this affection a correspondent of the *Lancet* recommends chaulmoogra oil carefully rubbed into the arm night and morning. This oil, he states, is now generally used by men after their first day's hunting, and also by bicyclists after their first day's long ride, because they find that it entirely prevents any irritation of the skin or stiffness if it is well rubbed in before they retire to bed. (How would goose-grease do?—E. S. G.)——THE AGE OF GERMAN MEDICAL COLLEGES.—The university of Prague was founded anno Dei 1348; Vienna 1365; Heidelberg 1386; Leipzig 1409; Freiburg 1454; Greifswald 1456; Basel 1460; Munich 1472; Jena 1558; Wurzburg, 1582; Göttingen 1737; Berlin 1810; Zurich 1833. Wuerzburg is celebrating this year its third centenary jubilee. —— PRAGUE AS A MEDICAL CENTRE.—In every respect, now, Prague deserves the attention of any one going abroad to study. Everything is cheap, even whatever private instruction a man may want. I think no one ought to study in Europe until he has done some work and some practice at home; but to such I can most cordially commend Prague, both as a place where he will be treated much better in every respect than in Vienna, and as a field for study which compares most favorably with Berlin and Vienna, and perhaps ranks next to them.—*Roswell Park in Chicago Medical Journal and Examiner.*——A HORSE IN SPECTACLES.—In a paper on nearsightedness lately read before the New York County Medical Society, Dr. W. F. Mittendorf told of a fine horse in Berlin that became intractable, and on examination proved to be suffering from myopia. The owner had a pair of glasses made for it, and it became as tractable as ever. American students, Dr. Mittendorf said, are not so subject to nearsightedness as German students. Sedentary occupations and want of exercise develop myopia, and women, therefore, are likelier than men to contract it. It generally sets in in childhood; rarely appears after 21 years of age. Blindness often follows neglect of it. Glasses should be worn early in life to prevent its progress. They should be rather weak than strong, and a slight blue tint is desirable.——BASKET BURIAL.—In expectation of a visit of Dr. Seymour Haden to the United States attention is called to his merits as an artist. For wholesome recreation from the occupation of a surgeon in London he studied the art of engraving, and has become one of the most famous etchers of modern times. But there is a matter in direct connection with Dr. Haden's professional pursuits which is capable of making his visit of larger interest, if an agitation of it should be revived.

Some ten years ago Dr. Haden began to advocate "basket burial"—that is, the substitution of wicker instead of close wooden or metallic cases for coffins. The plan combines pecuniary with sanitary advantages. It would diminish the ordinary expenses of preparation for burial besides promoting the absorption of the corpse by the soil. A series of letters on the subject, addressed by Dr. Haden to English journals, attracted much notice in 1875 and 1876, but the method of interment he prescribed found litte favor among the very people to whose pecuniary means it should especially have commended itself. Fashionable London "took it up" with a transient curiosity.——SOAP PAPER.—Dr. Addinell Hewson presented before the Medical Society of the State of Pennsylvania. at its last meeting, some specimens of paper, tissue or manila, which had been saturated with a solution of soap, and dried. Pieces about the size of a visiting card contain enough soap, for shaving or for washing the hands. The superior cleanliness of this method of using soap, especially in hospitals, hotels, etc., is evident, and the proposer also insists that it saves soap. For preparing the paper, a strong watery solution of English glycerine soap is used, in which the paper is immersed; after drying it is cut into pieces of suitable size, and dispensed.

YELLOW FEVER scourged Pensacola. The mortality was excessive. It has disappeared in Texas. The keeping of the disease at both places within bounds by the enforcement of a *cordon sanitaire*, proves the contagiousness of this fever.——The Pathological Society of Philadelphia has offered a prize of fifty dollars for the best original paper based upon pathological investigation read during the winter by a member who is a hospital resident.——Dr. J. J. Woodward, of the U. S. Army, has returned from Europe, and the profession will regret to learn that his health has not been improved by his trip.——Thirty-five young doctors have recently arrived in this city from Russia.——A night medical service will be established in Brooklyn next January. A service has been established in Washington, D. C. In this city the night medical service has an average of one or two calls every night.——The New York Polyclinic is the name of a new medical school just established in New York. The New York Post-Graduate School, which was organized during the past summer, will begin its first course of instruction on the first Monday in November.——Dress Reform.—We note, from the *Lancet*, that the sum of $750 is offered to the Rational Dress Society to defray the expenses of an exhibition of rational dress, to be held in London during the coming winter. A prize of $150 will be given for the dress which best accords with the following requirements: 1. Freedom of movement. 2. Absence of pressure over any part of the body. 3. No more weight than is necessary for warmth, and both weight and warmth evenly distributed. 4. Beauty and grace combined with comfort and convenience. 5. Not departing too conspicuously from women's ordinary dress.——An Insane Asylum Abolished.—The New Orleans City Insane Asylum has been abolished, and 135 of its inmates, in charge of a large number of attendants, hhve been taken to the insane asylum at Jackson, La. This action is due largely, it is said, to the exposures of the ill conduct of the institution made by the novelist, George W. Cable, who has been a sort of American Charles Reade in the matter.—*Record.*——Buchanan, of bogus diploma memory, has finished his term of imprisonment, and is abroad again.——The Health of London.—The death-rate of London during the two summer months reached the extraordinarily low figure of 13.45 per 1,000. That the city is less healthy in winter we might infer from the statement that the weight of the soot hanging over London on a winter's day is 50 tons, while that of the carbon dioxide is 250 tons.—*Record.*——A marble bust of Virchow has just been completed for his Pathological Institute.——The death is announced of the celebrated chemist, Professor Wöhler, of Göttingen, at the age of 82.——Fireproof Upper Works for Steamers.—The need of incombustible upper works for river steamers is once more made emphatic by the burning of a magnificent passenger boat with heavy loss of life. Early in the morning of September 30 the Robert E. Lee, one of the finest and fastest of the large steamers plying on the Mississippi river, was destroyed by fire about 25 miles below Vicksburg, Miss. The origin of the fire is not known.——We regret to announce the death, at his residence, Cavendish place, of Mr. J. T. Clover, Lecturer on Anæsthetics at University College Hospital.——Personal.—Dr. Morell Mackenzie, of London, has been making a six-week's tour in this country. His travels have extended across the Continent, and he has received marked attention.——Washington Monument.—Washington monument now exceeds 300 feet in height, and is rising at the rate of about a foot a day. The workmen are protected by a strong netting which surrounds the top of the monument. Already the net has saved the life of one workman, who was blown from his place by a gust of wind.——Trouble in the Medical College of Virginia.—Gov. Cameron appointed a new Board of Visitors for the Medical College of Virginia, in Richmond, thereby summarily displacing the old board. This action created much excitement, and has been resisted by the Faculty.——Electric Lighting on the Pennsylvania Railroad.—The Pennsylvania Railroad Company have taken the lead in experiments looking to the adoption of electric lamps for passenger cars. The electric storage is accomplished by the use of secondary batteries underneath the floor of the cars, thirty cells of battery furnishing current for six Edison lamps for seventeen hours. Test experiments made September 19 are said to have been very satisfactory to the officers of the company.——The death-rate in New York appears to have been exceptionally high last year. According to Consul-General Archibald's report the rate of mortality rose from below 26.50 per 1,000 in 1880 to 30 per 1,000 in 1881. Half the number of deaths from zymotic diseases, amounting altogether to 13,496, were attributed to diphtheria, scarlatina, and diarrhœa.——The Garfield Memorial Hospital Board has received a deed of the valuable real estate of the National Soldiers' and Sailors' Orphans' Home. The Board will at once sell the land, and purchase a site in the city for the proposed hospital.——The *Sanitarian* announces that on the first of next year it will appear as a weekly journal, with 32 double-column quarto pages. It will continue under the editorial management of Dr. A. N. Bell.——Dr. Julius F. Miner, long connected with the Buffalo *Med. and Surg. Journal*, and Professor of Clinics is compelled by ill health to retire from both editorial and college work.——An ingenious method of instantly stopping machinery when in motion is said to be in operation at the Dominion Bolt Works, Toronto. A wire rope, coiled around the stem of the throttle valve of the engine, carries a weight which is held in place by a rest, and the whole arrangement is so placed that the passing of an electric current along a wire releases this rest, and causes the weight to fall. The tension thus thrown upon the wire rope acts upon the throttle valve, cuts off the supply of steam, and consequently stops the machinery. Buttons, with wire connections, are placed in different parts of the works, and, on pressing any one of these, the passage of an electric current acts as above mentioned. In any factory these electric buttons can be placed in every room, or several of them in a large room, as may be required. Should any one happen to get caught by the machinery, the simple pressing of a button in the most distant part of the factory will stop the whole as quickly as could be done were the engineer standing ready to instantly obey a given signal.——NEW YORK ACADEMY OF SCIENCES.—The Geological section of the Academy of Sciences met at their rooms, 12 West 31st Street, Monday evening, Oct. 9. Dr. J. S. Newberry president, in the chair. Mr. Chamberlain exhibited some beautiful specimens of hiddenite from North Carolina. Mr. Geo. F. Kuntz exhibited fine crystals of apatite from Rideau, Canada, also large plates of phlogphite (mica) which exhibited a very interesting property, viz.: when held between the eye and a gas light six rays were seen to extend from the light at angles of 60° from each other, each ray being made up of a series of short parallel bright lines very close together. Mr. F. Cope Whitehouse exhibited, by means of a lantern, a large number of views of the caves on the Island of Staffa, the most interesting being the famous Fingal's Cave, After fully describing their form, size, etc.. Mr. W. stated his belief that they were not, as generally supposed, produced by natural causes, but are artificial caves made by the hand of man at some very early period. Among other reasons given for this conclusion were the following: The high and pointed roof of Fingal's Cave, resembling the roof of a Gothic church, whereas natural caves have a low and flatly arched roof; the caves of Staffa are protected by breakwaters, or other barriers, from the force of the waves of the Atlantic, which could hardly have excavated caves of such depths at a few points; some of the caves are twelve times as deep as they are wide, with straight sides; the basaltic columns do not crumble nor form shingle, yet none of their remains are found near the mouth of Fingal's cave, hence they must have been carried away by man to a great distance, probably to Scotland. Some discussion followed the reading of the paper by Prof. Day and others, showing that the members of the Academy were scarcely prepared to accept the conclusions of Mr. Whitehouse.——The Minister of Public Education, of Russia, has found that the experiment of giving elementary instruction in medicine at the municipal schools of St. Petersburgh has been so successful that he has authorized its extension to all the municipal schools throughout the empire.——Among the prizes awarded by the French Academy of Medicine at its last annual meeting, one of 10,000 francs which is only awarded every six years, was divided between Dr. H. J. Bigelow, of Boston, and M. Th. Auger, Dr. Bigelow receiving 6,000 francs and M. Auger 4,000 francs.——It is stated that no appointment will be made to the chair of Animal Morphology in the University of Cambridge, rendered vacant by the death of Mr. F. M. Balfour.——A MEDICAL CASE FOR RAILWAYS.—The Pennylvania Railroad Company has had prepared for carriage on each locomotive of the company, a box of appliances to be used in case of accidents The box contains: one rubber compress one package of absorbent cotton, six rolls of bandages, and one pyramid of pins. A label on the box tells how the outfit is to be used, and directs that it must always be kept up by immediate requisition for any article needed. This outfit is obviously intended mainly to meet necessities arising from accidents to trainmen in the ordinary course of events; yet it might prove very serviceable to injured passengers in case of large disasters.——EDISON'S ANÆSTHETIC.—Thomas Alva Edison has invented (?) a new anæsthetic compound of a mixture of chloroform, ether, alcohol, and camphor, which he has protected by letters patent in England and Germany. He probably wishes to use the new compound on the stockholders until the electric light is in successful operation.—*Chicago Medical Review.*——Failures to pay on the part of life insurance companies amounts, says the *Ledger*, to only one per cent., making such an investment the safest risk for any one.——Limiting Athletic Sports and the Repudiation of "Professionals," by Harvard, is a wise and much needed movement. The students at Harvard have differed but little, lately, from "professionals," and their course in this regard was rapidly becoming a scandal.——Yellow fever at Pensacola still prevails; up to Oct. 28th 1,880 cases, with 170 deaths.——Dr. Marion Sims is still in New York. He soon sails for Europe to remain for the winter. His health is fully restored, but prudence dictates this course as discreet.——Beequerd's statue at Châtillon has at last been erected.——Rossbach succeeds Nothnagel at Wurzburg.——Brooklyn is to have a night medical service.

DIED AT BELVIDERE, N. C., October 5th, after a brief illness, and in her fortieth year, Mrs. Vashti Lamb, wife of Dr. B. F. Lamb of the same place. Her death was caused by hæmorrhagic fever. So has passed away a pure and noble woman !

EDITORIAL.

"Nullius addictus jurare in verba magistri."—HOR.

HEADS AND BRAINS.—There are many who still cherish the obsolete idea that a large head is filled with a large brain, and that the large brain is an exact measure of mental capacity. How few remember that there may be a large head with small cavity; or that the large brain may lack the average, or super-numerary convolutions, and that those actually existing may be wanting in depth, and breadth and development.

The question whether the head of civilized man is becoming smaller is, however. attracting much attention.

The subject was first agitated by writers for *Nature*, London, one of whom, Mr, F. F. Tuckett, insists that the average size of hats has decreased one size within the last twenty-five years, which means, if the criterion is to be trusted, a diminution of three-eighths of an inch in average circumference. As Mr. Tuckett adduces in evidence of his assertion the testimony of leading hatters from London, he is probably right so far as that part of the case is concerned. But there are, as Mr. Charles Roberts explains, in a rejoinder to Mr. Tuckett, various reasons for the average decrease in size of hats, without accepting that gentleman's view of the cause. In the first place, men wear their hair cropped more closely than they did years ago, and in the second, the fashion now is to wear one's hat on the top of the head, instead of pulling it down over the ears, as was done by men of the last generation. Again, the tall hat is now worn by a large class of persons who are uniformly small-headed, such as clerks and shopmen, who formerly did not affect such luxury, while, on the other hand, many persons of the large-headed class, clergymen and others, who wore tall hats only a few years ago, have now given them up, and prefer the soft felt to the uncomfortable section of stove-pipe once in vogue. The only way to get at the truth would be to examine the statistics of each class separately, and to make an allowance of a quarter of an inch for the present mode of wearing the hat and of cropping the hair. But if Mr. Tuckett's view is to be accepted, then, while the head has lost in size, there has been a general gain in weight and vigor of body; for, comparing the statistics of factory children in 1833 with those of 1873 in England, it is found that children of 10 years of age now are as tall of stature and as heavy as children of 11 years of age were forty years ago. There is great variety, however, in the size of heads among the intellectual classes in England. According to Mr. Tuckett, Lord Chelmsford wears a 6½ hat only, and the sizes of prominent people he gives as follows: The late Dean Stanley, 6¾; Lord Beaconsfield, 7; the Prince of Wales, 7; Charles Dickens, 7⅛; Lord Selbourne, 7⅛; John Bright, 7⅛; Lord Russell, 7¼; Macaulay the historian, 7⅜; Mr. Gladstone, 7⅜; Thackeray, 7⅝; Louis Philippe, 7¾; M. Julien, the celebrated musical conductor, 7¾; and the Archbishop of York, 8. The prelate must possess a head of nearly 24 inches in circumference, while that of Dickens was average, that of Thackeray beyond the average, and the head of Louis Philippe was very large.

The Actual Wisdom of the General Practitioner.—There are few medical men who have the frankness, or the honesty, or the courage to reply "I don't know," when asked for information in regard to a subject of which they are wholly ignorant. The laity are so apt to regard a doctor, on medical subjects, as omniscient, and the doctor is so fond of being so regarded, is indeed so tickled at the conceit of his great erudition, that there are few certainly who have the manliness to resist such temptation.

Dr. Emerson, in a very interesting address, recently delivered, and after saying (perhaps rightly, perhaps wrongfully) that the country doctor was especially given to this harmless if weak imposition upon the Public, thus amusingly writes, and let each one take the criticism to himself; not only the country doctor, but also, quite as definitely his city friend, who in his serene and self satisfied importance, may not regard himself as a fit and proper target for this expert and cunning marksman. Dr. Emerson says to each as follows:

"The demon spreads a more subtle net, when undue praise comes to us and our vanity is pleased by having things come out altogether too well. Every one of us I fear, occasionally narrowly escapes playing the charlatan. Our brothers of the city may not consider the strain put on the courage and even the honesty of us, the rustic members of the guild, who are consulted, like oracles, on every branch and specialty of medical knowledge. Since the great growth of medical science in the last thirty years, the learning that one man can attain must be spread *very thin to cover the field.* A doctor who attempts to be what the English sometimes call contemptuously a G. P. (not Grateful Patient but General Practitioner) may be likened to a general atlas, which from the necessities of the case, must show in some sort the whole world, and so as to have large yellow spaces, like the old maps of Africa with perhaps "Mountains of the Moon," or "Country of the Ethiopians," or even, as the oldest maps, repesentations of monstrous beasts or anthropophagi to fill up with. Not every one is ready to write "Unexplored" on tracts which his friends seek to know about; sometimes, too, a hint of the dangerous beasts that may dwell there *may seem expedient for the patient*,

To us country doctors, this temptation to hardiness, to which our position educates us, in assumming and conducting all sorts of grave cases, becomes a source of danger, inasmuch as we are only judged by an incompetent public opinion; not by good medical standards. We do what seems to us right and justifiable, but, as we are not intelligently criticised we may become over confident, and confirmed in ways which are not scientific; and which need reformation."

TESTS OF MERIT.—The season of the year has arrived when most of the journals are showing, or rather undertaking to show, why they are superior to all other publications of a similar character. Some journals, it must be admitted, are always "harping upon the single string," of their own preëminent excellence; but, as a rule, most journals offer syllogisms and conclusions as to their great merit only near the close of the year.

Some are "national in scope and character." Some are "brief," and give much in little, or say that they do; many have "the largest circulation," and this, in their judgment, is the highest reason for their having more. Some are "cheapest," asking little and giving less.

Then come the special journals. For them all the world is only for the eye, or the ear, or the throat, or the skin, or is chiefly to be taxed for relieving the unfortunate votaries of Venus. All ask for consideration. All present their little tests of merit. Ah, what is merit? A large publishing house floats a journal, as an advertisement for its publications, and its editor believes that his merit gives the work size and circulation. A medical college carries another journal, and the occupant of the eleemosynary sanctum says, like the little fly on the chariot wheel, "How we spin!" One says I am greatest, and the other cries, with Paracelsus, "Lo, it is I." All have their little tests of merit.

Edmund Kean once heard a stage carpenter thus settle the pretensions of impersonators of Hamlet: "You may talk of Henderson and Kemble and this new man," said the carpenter; "but give me Bannister's Hamlet. He was always done twenty minutes sooner than any of 'em." Self-interest is a very sad warper of the judgment, and devises very strange tests. Going over the graveyard of the "Old Meeting," at Birmingham, with the clerk, Joshua Vernal asked him who was the greatest man lying buried there. "This is he," answered Mackay, pointing to a grave; "I get 5s. a year to keep it in order." "But what was he? what did he do?" inquired the increduluos Joshua. "Why," said the clerk, "he invented the holing of thimbles." Vernal thereupon pointed to the grave of a distinguished scholar as being that of the greatest man there; but the clerk pooh-poohed the preposterous suggestion, saying: "No such thing; I only get a paltry shilling for that grave." His test of greatness was a purely professional one, like that of the Worcester barber, who confidentially told the Mayor he did not think much of "this British Medical Association; nine out of ten of them don't shave at all, and the others shave themselves."

What will the journals offer this Winter as their little tests of merit?

TOM FOOLERY AT THE BEDSIDE.—At the present time, when auscultation assumes to declare the diurnal progress of the minutest pathology; when students are taught, and even practitioners are taught, that it is their duty, by daily and even tri-daily ascultation, in pulmonary disease, to note the pathological changes occuring, and so to keep a record of these at the bedside, it is time to suggest on the part of those who love the right, and who have a regard for the comfort and peace of their patients, that such teaching ought to have had its day; and that common sense should now be recognized and appreciated.

To the young enthusiast fresh from the Hospital and the College, it seems to be the very glory of science for a medical man, by tri-daily percussion on the chest of a pneumonic patient, and by listening to the mysterious sounds issueing from the human cavern within, to declare the progress or regress of disease, to map out on the chest a mystic diagram, and to triumphantly declare to the worshipping votaries around the bedside, that, by this map they see illustrated the morbid changes in the sufferer, and the triumphant skill of the attendant entrusted with his salvation.

So it seems to the young graduate; and to the neophytes who regard their medical college as the very temple of science, and its faculty as sacred as the high priests at the altar. But how does all this appear to those of maturer age, to those who can criticise the attendants as closely as these scrutinize the patient confided to their care ?

No one would underrate the powers, the blessings, the efficiency, the accuracy of the great science of physical exploration, but it is because this great science is so complete, so marvellously accurate in its teachings now on permanent record, that all of this daily thumping and auscultating of a patient is useless; is but the merest tomfoolery. This great science has fully made apparent not only the pathological changes taking place in pulmonary disease, but has explained also the philosophy of the laws by which these changes are determined and appreciated.

Who would dissect a variolous ulcer to enable him to tell or foretell the changes occurring in a variolous patient ? This has been repeatedly done. The changes are well known. Why torture a patient then to prove the truth of what is so fully admitted ? But are these changes any better known, than are the changes known to take place in advancing or convalescing pulmonary disease? If the patient in small-pox is to be spared, is the pneumonic patient to be the victim of pedantic tomfoolery? In the name of humanity, and common sense then, a mild protest is in order, and readers are asked, if this be so, to join their forces in protecting patients from useless suffering, and medical science from the opprobrium of clinical absurdity.

Any expert physician can tell by rational evidences, whether a case of pulmonary disease is better or worse. If better, he knows what tissue changes (as revealed by the science of physical exploration) have occurred. Why then prop up the sufferer to endure more suffering? If the case is seen to be worse, the question made is even more pertinent and practical.

These views may seem untimely, unfashionable, even unpopular; but are they unfair, or untrue, or even incorrect ?

Dr. Oliver Wendell Holmes has recently written as follows: His are words worthy of attention. "Auscultation was formally brought before the world by Laennec in 1819, and percussion, revived by him after more than half a century of comparative neglect. Of this I can speak with some confidence, for I was once well acquainted with it practically, and I have made many an ante-mortem autopsy with my stethoscope and pleximeter. There is no need of insisting on the value of a method of ascertaining the existence of disease so obviously of great assistance. But it may be carried too far, and I am afraid sometimes is so. I have often felt when seeing hospital patients worried by hammering and long listening to their breathing, in order that the physician might delineate nicely the diseased territory, the boundaries of which he could not alter, as if it was too much like the indulgence of an idle, and worse than idle, curiosity. A confessor may ask too many questions—it may be feared that he has sometimes suggested to innocent young creatures what they never would have thought of otherwise. I even doubt whether it is always worth while to auscult and percuss a suspected patient. Nature is not unkind in concealing the fact of organic disease for a certain time. What is the great secret of the success of every form of quackery? *Hope kept alive*, What is the too frequent fatal gift of science ? *A prognosis of despair*. "Do not probe the wound too curiously," said Samuel Sharp, the famous surgeon of the last century. I believe a wise man *sometimes* carefully worries out the precise organic condition of a patient's chest, when a *very* wise man would let it alone, and treat the constitutional symptoms. The well-being of a patient may be endangered by the pedantic fooleries of a specialist."

"POST-GRADUATE COLLEGE" AND "THE POLYCLINIC."—The attention of all physicians is invited to the fact that under the above titles, two new medical schools have been organized and are now in operation in this city. The Post-Graduate School is for graduates and chiefly for physicians who wish "to brush up" in all of the departments of medical and surgical practice. In this institution the teaching will be done chiefly by clinical lectures, and the ordinary didactic teaching will be, as a rule, avoided.

In the "Polyclinic," the teaching will be done exclusively by the clinical method.

All of this improvement in medical teaching in this city is the meeting of a long felt want, and will unquestionably be successful, if properly sustained and thoroughly managed.

These methods, however, can not succeed unless they are most carefully and judiciously executed. Of one fact their representatives may feel assured, and that is, that the teaching must be clinical to command attendance. Physicians will not "sit on the benches," as the students did in early life to listen to either the best written or the best delivered didactic addresses. The ablest extempore, or apparently extempore didactic lectures, must also be repudiated. Such a class must have and will have only clinical teaching, abundantly illustrated.

Another fact is equally important. The teachers must be men, and not boys in their profession. They must be teachers who speak "from practice," and not "for practice." Who speak from experience, and from a position in professional life which will give an *ex-cathedra* prominence and weight to their utterances. The best prepared men, if they have not already acquired position and can speak from an abundant experience, will not and will never obtain an audience of physicians. Thus much may be said with decision, with emphasis, and with absolute correctness. Those gentlemen who represent these new schools may feel absolutely sure that what is here said will be accepted as the truth, and is accepted as the voice of the entire profession.

As to what has been urged in regard to New York city being a pioneer in such a movement, of course, all well informed men know better. It is the sheerest and veriest nonsense. Harvard, Bellevue, the University of Pennsylvania, the Jefferson Medical College, and other institutions have had post-graduate courses, and have delivered them efficiently and successfully. But this has been a mixed or dual function on the part of these schools. They have taught, by the usual didactic lectures, to ante-graduates, as well by the clinical and laboratory methods to Post-graduates. What New York does claim and can claim is, that these medical schools are the first in this country to teach by clinical methods alone, and exclusively to graduates. Of course, colleges in other cities will be organized, similar in character and function; and the old colleges will teach post-graduates after the regular didactic course is completed. But this does not alter the fact that for an exclusively clinical method for graduates, these schools in New York are the pioneers. All who wish the right and useful to succeed must wish and do wish for them an abundant success.

Simplicity in Technology.—The paper entitled "Genital Renovation by Kolpostenotomy ank Kolpoecpetasis in Urinary and Fecal Fistules," is by Nathan Bozeman, M.D. It presents us in its first pages with the spectacle of the birth of a new word, for, following the example of the ophthalmologist, the gynæcologist is now striving to bar the entrance to his specialty with mighty names. The reader of this paper must encounter and overcome cystostellosis, kolpokleisis, kolpostenotomy, kolpoecpetasis, kolpostenosis; and when there are thrown in a few other big words from outside sources, as pyonephrosis, etc., it is still more bewildering. Hysterocystokleisis is a good word, if it stops growing. Then we have hysterokleidic, episiokleisis, anakainosis. "Some may object," the writer says, "to the introduction of so many new words;" but the introduction is a small matter: the difficulty is in recognizing them the next time one meets them in literary circles.—*Med. Times.*

The paper, however, apart from this criticism of words, is excellent and instructive.

Abolition of Duty on Books.—Mr. E. Steiger, publisher of New York city, is entitled to the gratitude of the profession and reading public for his earnest and laudable efforts in this direction. The duty on books ought to be abolished *in toto.* Away with the present inconsistency of a civilized country in placing Government obstacles in the way of the readiest possible acquisition of the world's knowledge and yet making education ostensibly its chief corner-stone.

Subscribers Need Reminders, it is said, that their subscriptions have expired. Those of this Journal are, of course, excepted; as they would feel deeply mortified to have it supposed that they ever allowed an obligation of this kind to escape their attention; or to need the attention of the publisher. Most Journals and Magazines have their own method of calling attention to this subject. Some use a colored wrapper, or an X on it, in red ink, or some caballystic device to secure attention; but the following it must be confessed is unique:

"Subscribers of the *Boomerang* who find cross-bones and skull, with crest of metallic burial casket drawn in red blood, on the wrapper of their paper, will know that their subscription has expired and that something has got to be 'done.'"—*Laramie Boomerang.*

SOUNDS FROM THE SANCTUM—PROOF READING.—Many contributors conclude the letters accompanying their articles with this request: "please correct any errors, and read the proof yourself." This is supposed to be very pleasant and delightful to an editor! What suffering the correcting of errors in orthography and diction entails no one can describe. It is wel-however to give these writers a fair conception of what the delights of proof reading are. They are thus described by an expert:

Some writer has produced a poem entitled "Sounds from the Sanctum." It reads too prettily, and gives rise to the thought that the avthor never visited the sanctum when business was in full blast. If he had, he would have seen two saints, one pouring over a proof-slip, the other holding the copy, and the sounds would have been something like this:

Proof reader: "As bowers without the sunshine fair—comma—so comma—without you—comma—do I—full stop---breath a dark and dismal mare—"

Copy Holder: "Thunder ! not mare, air."

Proof Reader: 'I breathe a dark and dismal air—comma—of flowers—comma.'

Copy Holder: "Shoot the comma."

Proof Reader: "'Tis done. As flowers without sunshine fair—semi-colon—confound No. 7, he never justifies his lines—No joy in life—comma—no worms—"

Copy Holder: "Warmth."

Proof Reader: "No warmth I share—comma—and health and vigorous flies—"

Copy Holder: "Blazes! Health and vigor fly—"

Proof Reader: "Health and vigor fly—full stop."

That's about the sound of it.

Reader, that is a fair description of the pleasure (?) of proof reading. You are distant and can not suffer. But in Heaven's name correct your articles before sending them.

BRIEF.—The editor of THE AMERICAN MEDICAL WEEKLY, is disposed to find fault with what he terms "The Brief Journals." Ah! my dear Doctor, ideas, are more wanted than words, and more valuable.—*Southern Practitioner.*

True ! but how are the ideas to be presented? Flint requires one hundred and forty-two pages in which to present his ideas on phthisis, in words. The scribblers for the "Brief" Journals are required to present every subject in "four hundred or six hundred words" !!!—E. S. G.

Dr. Jephson was a distinguished physician of Leamington fifty years ago. The doctor was noted for being brusque and unceremonious. A great London lady, a high and mighty leader of society, who was taken suddenly ill, sent for him. Jephson was so off-hand with Her Grace that she turned on him angrily and said:—"Do you know to whom you are speaking?" "Oh, yes," replied Dr. Jephson, quietly, "to an old woman with the stomach-ache."

WORTHY OF CAREFUL ATTENTION.—Dr. John S. Wallace, of Brunswick, Missouri, a thoroughly responsible and reliable gentleman, wishes to sell his place and a practice worth $2,000 a year, on account of ill-health. Those who read this notice and wish such a place and position should write at once to him.

ASTOR HOUSE OFFICE.—For the convenience of all visiting friends and those doing business with this Journal, the editor has taken an office, permanently, at the Astor House: room 77. Every surface car, elevated rail car, and stage passes the Astor House, or comes within one or two "blocks" of it. It is the most central and convenient locality in the city. Send all letters and packages to P. O. Box 1124.

ANOTHER APOLOGY.—This number has been delayed by the transfer of the JOURNAL to another Printing House. The subscribers are asked to be indulgent in regard to the delay. The November and December numbers will be issued rapidly.

GAILLARD'S MEDICAL JOURNAL.

(*Formerly the Richmond and Louisville Medical Journal.*)

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ORIGINAL ARTICLES.

DRINKS, FOOD, EXERCISE, BATHING AND TREATMENT IN UTERINE FIBROIDS AND IN OTHER FIBROUS GROWTHS AND THICKENINGS, IN LOCOMOTOR ATAXY AND IN ALL SCLEROTIC STATES; OVARIAN TUMORS, GOITRE, AND IN ALL EXCESSIVE DEVELOPMENTS IN CONNECTIVE OR GLUE TISSUE WHEREVER THEY MAY OCCUR, WHERE SUCH DEVELOPMENTS DO NOT NORMALLY BELONG.

BY J. H. SALISBURY, B.N.S., A.M., M.D., NEW YORK.

I. DRINKS.—Drink a pint of hot water, one to two hours before each meal and half an hour before retiring. From fifteen to thirty minutes should be taken for drinking this water, so as not to distend the stomach to make it feel uncomfortable. The object of the hot water is to wash out a dirty, yeasty, slimy, sour stomach before eating and sleeping. The water should be drunk long enough before each meal to allow it time to get out of the stomach before the food enters. When thirsty, between two hours after a meal and one hour before the next, drink hot water, clear tea or crust coffee. Take no other drinks of any kind between meals. At meals drink one cup (8 ounces) of clear tea.

II. FOOD.—Eat the muscle pulp of lean beef made into cakes and nicely broiled. This pulp should be as free as possible from connective or glue tissue, fat, and cartilage. The "American Chopper" answers very well for separating the connective tissue: this being driven down in front of the knife on to the bottom board. In chopping the beef, it should not be stirred up in the chopper, but the muscle pulp should be scraped off with a spoon at intervals during the chopping.

At the end of the chopping the fibrous tissue of the meat (the portion that makes up fibrous growths) all lies on the bottom board of the chopper. This may be utilized as soup meat for well people. Previous to chopping, the fat, bone, tendons and faciæ should all be cut away, and the lean muscle cut up in pieces an inch or two square. Steaks through the centre ot the round are the richest and best for this purpose. Beef should be used from well fatted animals that are from four to six years old. The pulp should not be pressed too firmly together before broiling, or it will taste livery. Simply press it sufficiently so that it will hold together. Make the cakes from half an inch to an inch thick. Broil slowly and moderately well over a fire free from blaze and smoke. When cooked, put it on a hot plate and season to taste with butter, pepper and salt. Either Worcestershire, Halford, or Chutney sauce may be used on meats, if desired. A little celery may be eaten at each meal.

Avoid all other foods and condiments. This rigid diet should be kept up till the fibrous growths have either mostly or entirely disappeared; when bread toast, boiled rice and cracked wheat may be gradually brought into the diet list. Other meats may now begin to be taken, such as lamb, mutton, game, fish and whole steaks. If the fibrous growths begin to increase again, come at once square down to the muscle pulp of beef and continue it until all traces of the growth have disappeared. Then begin to bring in gradually, as before, other foods, moving along watchfully and carefully, keeping the stomach clean and the urine standing at 1.015 in density, and the appetite good. It takes from one to three years rigid work to remove fibrous diseases thoroughly and to break up all the diseased appetites, cravings and desires that have been at the bottom of the conspiracy in producing such grave pathological states. The patient will lose in weight, from the loss of fat and connective tissue, for the first few months. This, however, is a favorable indication, and need excite no uneasiness. After awhile the gain in blood, muscle, bone and nerve will be greater than the shrinkage; when a gain in weight will take place. This gain will be slow, but it will be all the time advancing steadily in the direction toward the healthy state. The physician and patient must be both satisfied with the steady improvement, even if it is slow. It is the only way open to a perfect cure and to perfect health. Extirpating a growth never removes the cause and never results in a radical cure. The same old alimentation may develop still further and other growths.

I have now several cases on hand where operations were performed but a few years ago, and already have fibrous tumors weighing from twelve to thirty pounds.

III. MEALS.—The meals should be taken at regular intervals, and it is better to eat alone, or only with those that are living on the same diet. All temptation should, as much as possible, be removed from the patient. If three meals a day are not sufficient to satisfy hunger, the patient may be allowed a nice piece of broiled steak between breakfast and dinner, and dinner and supper. These extra meals should be taken at fixed and regular intervals.

If care is taken in following out this plan of diet, it will not be long before the system gets in good order, the digestion and assimilation will go on nicely, and the patient will eat largely and with great relish. You will often be assured by the patient that there is no food so nice as a good cake of the well broiled *muscle pulp* of beef. The appetite becomes so good, and the relish for the beef is so great, that you need not be surprised to see anywhere from one to two pounds eaten at each meal. The patient should be cautioned to never eat on a tired stomach. Rest one hour before and after each meal; eat slowly and masticate the food well.

IV. BATHS.—Take a soap and hot water bath twice a week, for cleanliness; after which oil all over, and rub well from the head toward the feet. Every night or day sponge all over with hot water, in which put two or three teaspoonfuls of aqua ammonia to the quart of water; rub in well and wipe dry.

V. EXERCISE.—Ride daily as much as possible without producing fatigue. If not able to walk or ride, the body and limbs should be rubbed well from the head toward the feet, from ten to twenty minutes, morning, noon and night, by some one who has strength to do it passively, thoroughly and well, without exciting the patient.

VI. CLOTHING.—Wear flannel or silk next the skin, and dress comfortably warm. On retiring, change all clothing worn during the day, so that it may be thoroughly aired for the following morning. Keep the clothing sweet and clean by changing often. The bed should be thrown open on rising, and the bedding well aired during the day, and should not be made up till the patient wishes to retire. Good ventilation is very essential.

VII. MEDICAL TREATMENT.—Remember that the medicines cure nothing; they only aid in keeping the machine in good running order, while the cure is effected by careful and rigid alimentation. An alimentation freed as much as possible from all paralyzing and connective tissue forming elements. Tincture of iodine or iodoform may often be brought in advantageously for local application, while the iodides and bromides of potassium, ammonium and sodium may at times be used internally to stimulate action in the eliminating, glandular organs. Good, bracing tonics, may often be used before meals, to stimulate the digestive organs, and pepsine and pancreatine, taken during or after meals, may, under the proper conditions, help so far as they assist in aiding digestion and assimilation.

The great aim should be to keep all parts of the system in the most perfect running order that is possible. The philosophy of this physiological work is to dispense with all foods, drinks and medicines that tend in any way whatever to the getting and keeping the histological elements, organs and tissues out of order, and to persistently and continually feed and starve tissue as long as any remnant of the disease remains; healthfully feeding those tissues that need nourishing and starving those that have been over and unhealthfully fed.

It is not sufficient to look to weekly or monthly exposures for the cause, but daily and hourly. In creating either healthy or diseased habits, the healthy or pathological acts must be *regular*, *frequent* and *long-continued*, in order to become confirmed states of health or established conditions of disease. We must reach the underlying causes before we can cure. We may relieve and seemingly cure without knowing or removing causes, but such relieving and curing is not permanent.

We should remember that all these states and conditions we bring upon ourselves by something we are doing daily and persistently.

This wrong-doing must be stopped; then we may use with advantage any means that will help to gradually bring back and establish healthy states and habits in the diseased structure.

READ BEFORE THE BALTIMORE MEDICAL AND SURGICAL SOCIETY, SEPTEMBER 26TH, 1882, BY DR. WM. H. NORRIS, LATE SURGEON U. S. ARMY, AND MEDICAL DIRECTOR OF THE GRAND ARMY OF THE REPUBLIC OF MARYLAND, ETC.

MALARIA AND ITS PATHOLOGY, ETC.—The history of this disease in all its various types, reaches back to the earliest period of medical science. Not only were the common forms then known, but also the uncommon and the pernicious varieties of this malady.

Protagoris speaks of the intermittent fever and the tetanic convulsions which occasionally took place; he also tells us of the many cases that proved fatal; hence we would infer that he was the first to observe pernicious intermittent.

Celsus drew the distinction between the quotidian, tertian, and quartan varieties of this disease. Archigenes was the first, I believe, to recognize the complex nature of this malady.

It was not, however, until after the introduction of cinchona bark from Peru into Spain, in the year 1640, that any considerable degree of attention was given to the study of malarial fever.

This study was stimulated in a great measure by the conflicting results following the use of this drug, and also by the obstinate manner in which physicians clung to the old theories of Galen.

But no true and reliable results were reached from this new remedy until the great medical philosopher, Sydenham, conceived the idea of giving cinchona immediately after the first paroxysm, in order to prevent a second.

And in 1712 followed the classic work of Torti, in which the true nature of malarial fever was recognized.

Then in 1732 the labors of Galezzi and Werlhof, in the same direction as that of Torti.

And later on we have the works of Hoffman, Brown, Boerhaave, and still later on the classic works upon the nature and treatment of malaria by the great and good medical philosopher, Rush, of our own country, and who perhaps has done more to elevate medical science, than any other author that has ever written upon the healing art.

Notwithstanding all that has been written upon this subject, and all the various theories that have been advanced, still the great problem, What is malaria? remains unanswered, and up to the present time but little is positively known of the true nature of malaria.

The older observers merely demonstrated the presence of decomposing organic matter in marsh-exhalations.

And later on the idea was generally accepted that malarial poison was the result of a gaseous form of the decomposition of vegetable organisms, such as carbonic acid gas, carburetted hydrogen, etc.

Others again tell us they find the cause in the exhalations from living plants.

Again, others attribute the poison to subterraneous exhalations.

And still others deny any specific cause, and tell us they find the cause to be an accumulation or modification of the electricity of the earth and air.

I am aware that we live in an age of light and knowledge—an age in which the sciences and arts have been marching onward with gigantic stride.

And notwithstanding the wonderful discoveries made by the aid of the microscope in medical science, in unravelling many of the hitherto difficult problems in physiology and pathology and other kindred sciences, but, as yet, none of these means has been able to solve this difficult problem, What is malaria?

I know that Skoda, Baxa, and Balestra, of Germany, Harmon, of France, and Salisbury and others of our own country have published broadcast to the world, through the medical and secular press, that they have solved this question through the instrumentality of the microscope.

And that it consists in vegetable organisms of a low grade—the spores and algæ.

Salisbury tells us that he has found in his investigations in the valleys of the Ohio and Mississippi, that the sputa of the sick with malaria contain elongated cells singly or in rows, and which he considers algæ-cells of the palmella.

These he also found and collected on glass plates, set up over marshy ground, and in vast quantities on the clods of an upturned marshy soil.

He also states that these algæ do not rise above 100 feet above the level of the sea, and in order to prove his theory to be correct (germ theories), he was enabled, however, to produce intense intermittent fever by placing some of these clods in the open windows of houses 300 feet above the level of the sea.

But in opposition to the view of Salisbury and others upon this subject, Dr. Harkness states (in the *Boston Medical and Surgical Journal* in 1869) that he has found the palmella spores upon the snow-clad peaks of the highest Alps in midwinter; he also claims that they may very readily become mixed with the saliva and urine from without, and at the same time have nothing whatever to do with malaria.

Therefore, as I have already stated, none of these views have as yet been established by sufficient proof, and still the difficult problem, What is malaria? remains unanswered.

And for my own purpose I care but little whether this morbific poison consists of gaseous exhalations filled with algæ or not.

For of one thing I am positively sure, and that is as long as we have light, heat, and moisture on the one hand, and vegetable and animal matter on the other, we will have this morbific poison, miasma.

But, Mr. President and Gentlemen, there is another question in relation to this matter of malaria that will now claim our attention, a question of far greater importance to every gentleman engaged in the practice of the healing art, be he high or low in the profession, a question when fully understood and appreciated that will enable us to apply our remedial agents in such a manner as to eradicate this morbific poison from the human organism.

This question, Mr. President, is in what manner or in what way does this morbific poison (malaria) enter the human organism and what organs are primarily attacked by it?

But time will not permit me, in a paper of this kind, to speak of the theories held by the older writers upon this subject, namely that of the sympathetic by Darwin, that of the mechanical by Boerhaave, that of the spasmodic by Hoffman and Cullen, that of the putrid by Pringle, and to this catalogue might be added the simple but nameless theory of Brown, and the conclusive theory of Rush. The spasmodic theory of Hoffman was supported by the great Cullen of Edinburgh; it was illustrated and supported by all the powers of a man in whom the world knew not which most to admire, his learning, his talent, his eloquence, or his urbanity—a man to whom the attachments of his pupils appeared in some instances paramount even to their inbred love of life—and taught in a medical school, at that time without a rival in the world. We have no ground for surprise at the ascendancy and dominion which the spasmodic theory of fever acquired. It became, indeed, for a time, almost the idol of the medical world, nor has its influence as yet by any means expired. It mingles itself hourly to-day, in the consultation of physicians and it is unnecessary for me to add that, under some modifications and alterations, it is still ably advocated and taught by the older professors in by far the most respectable medical schools in America.

Notwithstanding all the beautiful theories presented as the proximate cause of fever by the medical philosophers of the past, I think and believe that it is upon the nervous system (brain and ganglionic) that we are to look for the proximate cause of fever, and that this system is primarily affected by the morbific poison. In fact, the theory advocated and taught by these great philosophers (Hoffman and Cullen) is measurably correct.

But we hold that they should have gone a step further in this direction, and looked to the nervous system (the brain and ganglionic) for the proximate or primary cause of fever, because the nervous system presides over all the rest.

We therefore hold that it is upon this system (the nervous) that this morbific poison (malaria) makes its first impression, and all the other phenomena that follow are but secondary.

Now, Mr. President, from this view of the subject we propose in as concise a manner as possible to prove that this must be the correct view, in order to explain the phenomena of all fevers, I care not whether it be idiopathic, symptomatic, traumatic, or congestive. Symptomatic fever, or fever dependent on local inflammation, presents the same phenomena as idiopathic, and it will be admitted that even in inflammation the nerves are first implicated and the action of the vascular system is secondary.

Certainly, if the sensibility and irritability of the part be not altered, there will be no inflammation, and they exist only where the brain and nerves are present.

But in inflammation, as in fever, the function of the vascular system is deranged, and, consequently, that of innervation, primarily, as it presides over the other.

Therefore, we maintain the cause of fever acts through the impression made upon the organs concerned in innervation, and probably by the malaria being taken into the current of circulation in lungs and stomach.

However this may be, it is evident that its first effects are manifested in the nervous system, and it produces impressions on this system, more or less lasting and more or less injurious, according to its amount and concentration. As poison acts, precisely, and as with poison (corrosive sublimate, for instance) its injurious effects cease with the antidote, although should the poison have excited inflammation previous to the giving the antidote, this latter will have no effect in curing the inflammation, only acting upon the poison and arresting its effects, leaving whatever inflammation may have been excited up to the time of its action.

But, as suggested, in all inflammation whatever, the function of innervation is more or less implicated, and consequently quinine, opium, and all sedative remedies have a direct tendency to favor its cause, at least such I have found to be the fact.

That derangement of the nervous system constitutes the initial link in the chain of morbid action, which occurs in the development of fever, cannot be doubted.

The mental and muscular languor rigors, pains in the back, limbs, and joints, also the irritability of temper, confusion and dulness of the intellectual power, which usher in febrile diseases, show beyond doubt that the nervous system is primarily inplicated ; or, in other words, they indicate lesions of the functions of innervation. Now, as this function presides over those of calorification, secretion, circulation and absorption, we cannot conceive it to suffer disorder or derangement without the others being more or less implicated, and such is the fact, for we constantly see in fever alteration of animal temperature and general disorder of the functions.

Again, as long as this function (innervation) is carried on in a healthy manner, those dependent on it, or over which it presides, will also maintain theirs. This we call a state of health.

Fear, grief, and joy, in short, all the passions act by the impressions they make upon the brain and nervous system ; and each has been known to cause immediate death. The cause of fever has also been known in the severe congestive form to deprive the patient instantly of all sensation and motion, and at times instant death. How can any other view of the pathology of fever than the nervous explain such phenomena.

Surely, death in such cases could not have been the result of inflammation, as this takes time to run its course. The rush of blood to the cheeks, as seen in blushing, the erection of the penis, and the rush of blood to the head, in anger, are familiar examples of congestion occurring suddenly and almost instantly from nervous influence, and no appearance in the early stage of fever is more universal than this irregular distribution of blood, evidently arising from the same cause—nervous influence.

The result, then, may be expressed thus, that in as much as the functions of calorification, secretion, circulation, and absorption, are all under the influence and control of the function of innervation (or in other words under the control of the brain and nerves) it must follow, that when disorder exists in this last function, the others become more or less inplicated, in direct ratio with such disorder. As, also, in the chain of sequences constituting fever, all these functions are constantly disordered, as the primary link is lesion of function in the nerve system, and as all the phenomena observed in fever are subsequent to this, and as the first effects of malaria are first manifested on the nervous system, it is therefore manifest that the true seat of the proximate cause of fever must be in this system ; and when we recollect that the action of quinine is admitted to be direct upon the brain and nerves, and that it is a sedative, possessing the power to cut short the paroxysm and arrest the further progress of the fever, the conclusion is inevitable, that the proximate cause of fever consists in some modification of the brain and nerves. Liebig in his "Animal Chemist," says : "It is singular that we find medicinal agents all dependent on certain matters, which differ in composition, and if, by the introduction of a substance certain abnormal conditions are rendered normal, it will be impossible to reject the opinion that this phenomenon depends on a change in the constituents of the diseased organism, a change in which the element of the remedy takes a part—a part similar to that which the vegetable elements of the food have taken in the formation of fat, of membranes, of the saliva, of the seminal fluid etc., etc.

And now how beautifully all this applies to the action of quinine in fever. The cause of fever acting on the human organization, may cause therein the change, waste or transformation of some element, which is supplied in the quinine when given, and as the cause of fever and quinine both act immediately upon the nervous system, it must be in that part of the organization we are to search for the explanation of fever.

And in fact it does seem to consist in some modification of the nervous system, caused by the malaria creating a change of function or structure or preternatural waste therein, as is seen to occur in other tissues during the progress of fever, and which are only remedied by the exhibition of articles containing the appropriate elements for the formation of such tissue. For instance, as gelatine in soup is supposed to act in convalescence, in restoring the waste in cellular tissue, cartilage, etc., so quinine may be supposed to act as food, supplying waste or change in the organism produced by fever in the nerve tissue. I have suggested that it is in this tissue we are to look for and find the proximate cause of fever, inasmuch as the *modus operandi* of the great febrifuge is directed on the brain and nerves, and inasmuch as in virtue of its composition it may be termed food for the brain and nerves, as caffeine and theine and asparagine are so-called food for the liver.

WHAT TYPHOID FEVER IS, AND WHAT IT DEMANDS. BY J. W. C. CUDDY, A.M., M.D. Read before the Baltimore Medical and Surgical Society, November 8th, 1882.

MR. PRESIDENT AND GENTLEMEN: When, some time ago, Dr. Chambers announced that I would open a discussion this evening, on typhoid fever, I little thought then, that I would comply with the announcement, as far as the *subject* was concerned. I really feared the adverse criticisms which I would encounter for presenting an essay on a disease, which is of daily occurrence, and one with which every active practitioner thinks he is thoroughly conversant. I am well aware that nearly every member of a medical society would rather hear a dissertation on something new and rare, even though the author knows but little of what he is writing, except what he gathers from some far-away medical journal, trusting that no one present has read the article in question but himself. But I tell you, gentlemen, that during the present year typhoid fever has made such fearful inroads among our people, that it behooves us to look well into the study of this dread malady. It has been of such great frequency, and of such marked fatality, that we cannot devote too much time and care to its investigation. It has, I am confident, carved deeply into the broad tablet of the experience of every physician in active practice, a history which is sad to contemplate. Then, taking all this into consideration, I readily comply with the announcement, and will present a short paper on this subject, hoping that what I say, whether new or old, will be the means of bringing about a discussion, which will give us the benefit of ripe experiences, and which will redound to the advantage of us all. If I so succeed, my mission for the evening will have been accomplished.

In the first place, are we able always to recognize the disease under consideration? In other words, are we thoroughly cognizant of the essential characteristics, which go to make up typhoid? Or, are there really any essentials? I trow not, for in fact there is not a single symptom or accompaniment of typhoid, which is laid down by writers as prominent, that is not, in truth, in many cases entirely absent. Why, even the latency and insidiousness of the disease, the slow prodromus, that is so much talked of as a special symptom, is notable for its absence. So careful an observer as Chomel reports that out of 112 cases 73 of those (or more than 65 per cent) began suddenly, without the least prodromic symptoms. And as regards the rose-colored eruption, which we were taught to look for as a constant accompaniment, the same distinguished observer reports it absent in 16 cases out of 70. And concerning the post-mortem appearance along the tract of the ileum, which is thought by many to be as unchanging as the laws of the Medes and Persians, it is often absent, and many cases of after death examinations have shown both Peyer's and Brünner's glands to be in a perfectly normal state. These changes and varieties so often occurring, and so many recognized symptoms being absent, prevent us from giving a clear and precise definition of typhoid fever, for like electricity, which can only be described by its results, it is only known by its acompaniments.

Why, if every medical gentleman in this room were to write out a definition of typhoid fever, there are no two that would entirely agree, and I am confident that some of them would be direct contradictions of others. The attempt at a definition of our subject reminds me of the story of the forty members of the French Academy, who undertook to define the word *crab*. Their definition was this: "crab—a small red fish, which walks backward." When this was shown to Cuvier, the celebrated histologist, he replied that it was correct, with the exception that "the crab is *not* a fish, it is *not* red, it does *not* walk backward." The very name itself is calculated to mislead, and many have believed and taught that it is but a modification of typhus, a typhus melior. It is very unfortunate that the Greek ειδος has crept into our professional literature, for I do not know a single *oid*, either in anatomy or pathology, that can truly be said to be applicable. There are really many diseases much more nearly allied to typhus than the one at present under investigation; prominently so, in this connection, being scarlatina and more especially the fever peculiar to the puerperal state. If there ever has been a disease truly typhoid, puerperal fever may be said to be one. I might with just as great correctness be allowed to improve our language, or at least increase its number of words, by designating an orang-outang, a *homoid*. In some respects it might be true, but it would not be very complimentary to the *genus homo*. This being misled by an incorrect name has caused many to designate the disease by other and widely different terms. Enteric fever, it being an approach to correctness, was suggested, but is now generally discarded as that had a tendency to localize the disease to too great extent. Its last new name, pythogenic fever, is probably one of the best yet given, but the older nomenclature of medical literature seems to be so well established that probably it will go on to the end of time by the name with which I began this article. There are, however, graver and more important considerations in connection with typhoid than its misnomer, and we will now proceed to the discussion of them, viz.: The causation, the prevention, and the treatment of this much-dreaded affection.

As regards the special cause of this disease, the light of the science of the present day has done much to dispel the gloom and doubt of the past. No more are the causes of typhoid fever, as laid down in the text books of a few years ago, to be thought of as correct now by the masses of intelligent physicians, than the assertion of Brother Jasper that "the sun do move" is received as truth by mankind at large. "Old things have passed away" certainly, in this case, and we are in truth at least *approaching* a correctness as to the etiology of many hitherto occult diseases. The real and only cause of typhoid fever is most assuredly a specific poison, and that poison a microscopic organism. The formerly acknowledged causes of this fever, such as loss of rest, fatigue, mental disturbance, etc., are not now recognized as such, but are merely circumstances which simply place the individual in a condition favorable for the reception of this morbific agent.

What this septic matter is it will be well to investigate. Microscopy has been an invaluable aid in the prosecution of this study, and has brought to our view much that was formerly hidden from the eye and mind of man.

That there is, however, a special micro-organism for every individual disease I very much doubt, but rather incline to the opinion that the same septic agent may produce one disease in an individual, and another disease in another person of a different temperament, or with his system in a different condition. Also, my belief is, that the germ will produce a different variety of disease, as it is taken into the system in a varied state of development. With this belief, I claim the identity of the germ which produces many of the allied diseases, such as typhoid, typhus, remittent, puerperal, scarlatina, and diphtheria. At the very least, if they are not the identical micro-organism in a different period of development, they are germs of one and the same genus. This is no new belief for me, I claimed it years ago, and there are probably gentlemen in this room, for there are many in the city, who heard me fifteen years ago express my belief as to the identity of the poison (not the identity of the disease, but the identity of the poison) which produced the just mentioned maladies. I believed it then, I believe it now; and that what I simply called a *poison then*, with the aid of advanced science, I *now* call *bacteria*, *micrococci*, *spirilli*, etc. What is there to prevent my holding to this opinion? They are propagated and developed in the same localities; they enter the system in the same manner; and they produce the same disastrous results. Then, if this be true, we could with safety call Brownian granules, vibriones, micrococci, bacteria, spirilli, and bacilli by one and the same name; or, at least, so simplify them as to place them under one genus, just as the cat, the lion, and the tiger are called by the generic term—*felis*. Their local habitat, their vital growth, and their actions being the same, the difference in size and shape can certainly be no argument against their individuality. Everything in nature shows the same general rule. The difference in microscopic appearance in these organisms is not more marked than that which exists between the swiftly moving minnow of the brook, and the ponderous fish of the deep sea; and they are both of one family. Their difference in size is not more proportionately seen than that between the diminutive advertising ponies of the dime museum and the massive Percheron horses of Mr. Walters, around on Exchange Place, and they are exactly the same in every other respect. Or may we not further conclude that one is simply the advanced life of the other? Why, we ourselves, in our change from childhood to full growth, make up a line in the same argument. There is not a person living who could come into this room to-night and select an individual whom he had not seen since his nursling days and recognize him; and yet he is identically the same person. And still lower down in life the same rule portrays itself. Who looking at the elongated, widened, tape-worm, if he did not know the history of its growth, would believe that it is the same being which once was naught but a little round hydatid, hid away in some fold of the mucous lining of the stomach? And yet its individual existence has not changed. And following the same line of reasoning, may we not conclude that a bacillus is nothing more nor less than an overgrown Brownian granule? Such is certainly possible, and in my opinion extremely probable.

The advantage to be derived from a knowledge of the causation of this disease is incalculable, both as to our method of treatment and to the prevention of the spreading of such a malady. Therefore great credit is due to such foremost investigators as Liebermeister, Pasteur, Harley, Murchison, Marchiafava, and other bright lights who dwell beyond the sea, and to Ephraim Cutter, of New York, Sternberg, of the United States Army, and others of our own country. Not that these men make the best of practitioners, but they open up for others a wide field of thought, over which they may roam and gather ripening ideas which may be of benefit to the world at large. They may be compared to the pioneers who cut their way through forest and jungle, and open up a track for the oncoming army over which they may march to victory and success.

The habitat of these vile generators of disease is precisely in accord with everything low and venomous in this world. The low, ignorant, and vicious part of humanity gravitate toward the slums of the city; poisonous serpents seek out slimy, filthy homes; and so these poisonous germs have for their dwelling-places the most unclean spots of earth, such as filthy cellars, decaying matter, and badly managed water-closets. Therefore, knowing their homes, we ought to know how to meet and vanquish them; but unfortunately hygiene is but little known by the masses and sanitary laws but little enforced.

All that is necessary for me to say here regarding the hygienic part of my subject may be expressed in a single line. Prevent their generation and destroy them where they exist. For the first part we have simply to avoid uncleanness, and half the battle is won, for these germs will not exist in the pure sunlight of heaven and the clean places of earth. If there is ever an expression in theology that can be made applicable to hygiene, it is the Wesleyan saying that "cleanliness is next to godliness." For the destruction of these micro-organisms, chlorine ranks first as an active agent, and among its preparations Platt's chlorides is, in my opinion, decidedly the best.

Evidently, there are but two ways by which these life-destroying germs can enter the human system, and they are either by inhalation or deglutition, either by a vitiated atmosphere or by a poison-laden drinking fluid. How important then that our sanitary laws should be made perfect, and the management of the construction of our water-works and sewers should be entrusted to scientific men.

If, however, these bacilli—if we may so call them—enter into the human organism, the work of death is surely begun, and will certainly end if not antagonized by powerful remedial agents. And this brings me to the treatment of this disastrous disease.

First, then, by knowing how these germs do their destructive work, we may know the better how to meet them. What they do when first impregnating the human frame is known only by results. We know that by some mysterious way there is brought on increased cardiac action, with nerve disturbance and general exaltation of temperature, all of which is included in the technical term, pyrexia. If there is increased heat, one of the causes of such heat must be combustion, which certainly means destruction by burning of the tissues of the body. Therefore, our first act must be to put out those internal fires—not by smouldering the flames, but by removing the exciting cause. A reducing of the temperature, and slowing the heart's action, and leaving the vital fluid still charged with these death-dealing germs is not curing typhoid fever, but only prolonging the malady.

Therefore sedatives, either nervous or arterial, cannot be demanded, for they simply narrow the channel through which the circulation is maintained, and leave the poison there. With as great propriety might the miller at the close of his daily toil attempt to stop the motions of his wheel by spikes and bars with the current of water which keeps up its constant revolutions still flowing, instead of diverting it to another channel. Then if this argument be true, aconite, gelseminum, digitalis, and similar drugs are inadmissible, and can do no more than lessen the heart's beat, while the destruction of tissue still goes on.

What is needed in the treatment of typhoid are medicines which will destroy the germ and repair the wasted tissue. Now, have we such remedial agents? To a certain extent we have, and yet in so large a number of cases the prognosis is so unfavorable, and in some sections and at some seasons the mortality so great, that investigations and experiments must be farther made. And yet I think that we have made rapid strides in the scientific management of this disease, with the accomplishment of good results. From my line of argument there can be but one deduction, and that is that the medicine primarily demanded here must be a *germicide* and *per se* an *antipyretic*. Have we such remedies? I believe we have; and among these the two most applicable to typhoid fever are mercury and quinia.

How mercury does its work we do not exactly know, but it is probably by coming in direct contact after absorption with the germ, and either paralyzing or destroying it. At the commencement of this affection you cannot help noticing the fall of temperature after the administration of a purgative dose of calomel or blue mass. And I believe that hundreds of cases of this fever are annually prevented by just such treatment. And were it not for unfortunate complications in the bowels which would make the continued use of this medicine dangerous, I believe that such would be the proper and scientific treatment. With such complications, however, we must use this powerful medicine either in very minute doses or apply it by inunction, which fails to have the decided effect that we have from this drug when given in larger doses.

On precisely the same principle I give quinine, expecting a specific action on a specific poison, and in this respect the disappointments are rare indeed. This in my opinion is the great sheet-anchor in typhoid fever, and perseverance in its use, day after day, will bring its just reward. As regards its administration I have only this to say—that in cases of this disease, where there is no change of temperature, except that which we naturally expect at night and morning—in other words, if it is a pure continued fever, I give quinine in small and oft-repeated doses, and when there is a marked remission

I give it in more heroic doses but at longer intervals.

The long continuance of this disease with the non- or partial elimination of the poisonous germ, and the consequent destruction of the tissues of the body, makes it imperatively necessary that we now administer some medicine which will have the power to retard its destruction or replace that which has been already destroyed. Fortunately we have two such agents at our command. The first is that which Nature has poured out so lavishly and abundantly, viz., the lacteal fluid; that article which, unaided and alone, supports us in our infant days is one of our main articles of food in health, and one that does not desert us in the hours of disease.

Milk or cream is one of the best supporting agents that we have, and buttermilk a grateful and excellent nutrient. The other is a remedy with which man has supplemented Nature and poured out almost as bountifully as milk itself, viz., alcoholic stimulants. This is the one great remedy that supports the sinking powers in the prostrating stage of disease, and recent researches have proved beyond a doubt that it also aids in the destruction of the micro-organism as well. This is now acknowledged the world over to be the medicine *par excellence* in the last stages of typhoid fever. And yet there are a few who hesitate to prescribe it on account of the evil it has done. What absurd reasoning! Why, everything that is powerful for good may be made a power for evil. Alcohol is not more baneful than the glistening catling when wrongly used, while in the hands of the skilful surgeon it means the saving of life, although when left with the imprudent it might become an instrument of death. The good results of alcohol are seen and acknowledged everywhere.

You know how highly it is recommended by Todd. Trousseau, Chomel, and Murchison place it in the first ranks as a curative agent. Liebermeister says: "Stimulants are admissible at any stage of the disease, even during the height of fever." Professor Wood says that alcohol more than any other agent retards the progressive metamorphosis of tissue. Flint, in his last and best work, in his article on Typhoid Fever, says: "Alcoholics are needed in every case." But far ahead of all these authorities is one's individual experience. I have seen its beneficial results so often that I would hesitate to treat a case of typhoid knowing that I would be deprived of its use. Its effects are so marked that they are visible to every one.

How often under its use I have seen the dull and lustreless eye light up with the brilliancy of former days; under its use I have seen the blanched and ashen cheek reillumed with the roseate hue of health; and under its use I have seen the shrunken and emaciated form again assume its wonted rotundity. Knowing all this I would be unfaithful did I not recommend it, and criminally neglectful did I not prescribe it. Why, as I write, scores of cases come crowding to my mind wherein I have seen the best of results from the administration of whiskey or brandy alone.

A case which well exemplifies the utility of this remedy alone was that of a rustic lass whom I was called to see when I practised in the Cumberland Valley in Pennsylvania. This lady had been ill for a long time, and attended by a physician who lived several miles from her residence, and who had told the family on the day preceding that on which I was called that he would not return, as further medication was useless and the case hopeless. When I first saw her, she was lying in a stupor, the teeth covered with sordes, and the tongue so dry, hard, and fissured that she could not protrude it; in fact every symptom seemed to verify the recently attending physician's prognosis. I, however, prescribed whiskey for her, telling them to give her one once (two tablespoonfuls) every hour till I returned. I left her with but a vague shadow of hope that I would find an improvement on my next visit. When I next saw her, at the expiration of twenty-four hours, I found that she had taken a pint and a half of whiskey, and its good results were marvellous. Improvement was very manifest, and she went on to a rapid and perfect recovery.

Another case was that of an old lady who had nearly reached her allotted time of life—indeed it is the only case of typhoid fever that I have ever seen in a person far advanced in years. After the disease had progressed for several days I thought it advisable to give stimulants, and so advised it. On my next visit I found to my dismay that they had given her none. Instead of the bottle of whiskey which I expected to see I found by her bedside a homœopathic physician, who proved to be the son of my patient, who had come to visit her. My method of treatment was opposed by him so strenuously that it amounted to a direct opposition to my giving it. He said, "Look at her condition." I did so. Her pulse was 120; her temperature very high—how high I do not know, for at that time I had never used a clinical thermometer. Said he, "With that fever you must certainly not give stimulants, but I will give her some powders which will reduce her pulse at once." Being somewhat apprehensive of serious results, I became very conservative and yielded. Said I, "Doctor, as the attending physician of this lady, I have the right to insist on what I think is proper for her; but you as her son and natural protector have a right to prohibit it if you so choose. So, while I have no faith in your powders, yet I will yield and allow them to be given; but if they do not have the desired effect in 48 hours I will then insist on my own method of treatment." To this he assented. At the expiration of that time she was much worse, her pulse feebler and quicker. She was then put on moderate doses of whiskey, and in 36 hours her pulse had fallen to 80, and her temperature was, according to touch, nearly normal. It was the turning-point in her case, and it led on to a slow but final recovery.

These cases, Mr. President, are not exceptional ones; they are historic and according to rule. And I believe that in a large, very large majority of cases, if the stimulating treatment is persevered in, you will be gratified by excellent results, although in some cases you will have to patiently wait through long and weary weeks, even almost till hope grows gray; yet the end will come, and that to the satisfaction of physician, patient, and friends.

Now, gentlemen, do not think that what I have here recited is *all* that I do in *every* case of typhoid fever. There are so many outside issues, as they may be called, so many grave complications that may arise, that they must be watched for and when met to be promptly and properly managed. It is however not in the province of this paper to treat of them. This is simply an *outline* of what typhoid fever is, and what its demands are in general. And such as it is, even with all its imperfections, I cheerfully lay it before you.

HYDROCYANIC ACID DILUTE IN THE TREATMENT OF GASTRALGIA. By J. THOS. SLIVALL, M.D., Columbia, Ala.

None except those who have had to contend with this trouble know how obstinate it is; often failing to yield to most, if not all therapeutic agents at our command. And it is to its treatment that I intend suggesting a few practical points, and I feel assured they will be appreciated *by some, at least* by *those* who have come in conflict with many cases. It has fallen to my lot to have the management of a good many very obstinate cases, and it taxed me severely to find a remedy in which I could place any reasonable degree of confidence in as a *curative agent.* I could very readily relieve an attack by administering a sufficient quantity of morphia, hypodermically, but this was only palliative, and just so soon as the effects wore off the attacks would return and ofttimes with renewed energy. I will cite a few cases. I have been compelled in some of the cases to stay at the bedside for hours and hours.

Case 1. Mr. E. S. Powers, æt. about 53 years, blacksmith, well muscled, habits regular and temperate. Was subject to what he termed spells of "bilious colic." Perhaps he would be at the forge, feeling as well as usual and at work, when he would be attacked with very severe pains in the epigastric region. These pains would run back to the spine at a place opposite the stomach, which, upon examination, would be found to be exquisitely sensitive. Also over the epigastric region, it being so sensitive to pressure that he could hardly allow to be touched. Sometimes over the liver would be very sensitive. These attacks were so extremely severe that he would be obliged to take his bed, and had from necessity been compelled to keep chloroform, morphia, and chloral in his room to relieve him until he could get a physician.

These attacks would last an hour, and I expect longer were he not obliged to take something for relief. I have often seen him when it seemed as if death was imminent *from actual pain.* The attacks came at irregular intervals, sometimes weekly, sometimes daily, and again he would have several a day. They came on irrespective of the quantity or quality of food taken. Vomiting was a usual feature in his case, and apart from the ingesta, consisted of a *thick, ropy mucus,* and in large quantities. The treatment consisted at first of morphia, hypodermically, chloral, sinapisms over stomach and spine, hot bath, and strict attention to the diet. The diet consisted of a nutritious but digestible one, and a while only fluid diet. This plan did not effect a cure, but was only palliative. The attacks finally came so often that I could not keep him from under the influence of some anodyne or narcotic, sufficiently long for him to give any other drug a fair trial. Tried strychnia, iron, bismuth, etc., through all category of agents at all likely to relieve him. The results in all were alike, an utter failure. He became emaciated, and had gotten to the point where it required as much as one and a half grains of morphia at one hypodermic injection to procure rest. I consulted all of my works, and noticed that Elliotson had used the dilute hydrocyanic acid in a few such cases with favorable results. I began with it immediately, and administered three drops thrice daily. In about four days I noticed an amelioration of all the symptoms. This was continued for two weeks with a complete cure. However, I supplemented this treatment by administering a ferruginous tonic and allowing a liberal diet. To-day he is in as good health as ever in his life, and is able to stand at the forge from morning till night at his usual vocation. Since five days after beginning with the acid he has not had an attack, not even a symptom of an attack.

The last attack was about September 1st. The cause of the gastralgia was, in my opinion, an engorgement and hypertrophy of the glandular structure of the stomach, the attacks being brought on by the movements of the stomach during digestion. *The rationale* of the good effects of the dilute hydrocyanic acid was that it allayed the morbid sensibility of this glandular structure of the stomach partially, and mostly, by its direct effect, and partially by its constitutional effects.

I will say here that I have never seen the hydrocyanate of iron fail to relieve or partially relieve all forms of neuralgia, but it did in this case, for I gave it a thorough trial. This was probably due to the failure on part of the gastric juice to dissolve, and the venous radicles to absorb it. It is needless to say that the conditions of the bowels and other emmunctories were properly and carefully regulated. He had no fever. during his whole sickness to amount to anything.

Case 2. Mr. T. D. W., æt. 28 years, unmarried, occupation salesman, habits irregular. This patient would indulge in wine too freely, occasionally, which would leave his stomach in a very irritable condition for several days afterward. This finally produced a catarrhal condition of the stomach, ending in severe attacks of gastralgia. The attacks in this case were not as repeated as in Case 1, but of equal severity. I will not spend time in reiterating symptoms, but they were very nearly identical to Case 1, and yielded to same treatment. The only difference is that he suffered intensely from enteralgia several times. Under *the acid* treatment, he has entirely recovered, and is in fine health, and *can digest a lightwood knot without pain.*

Case 3. Mr. J. B. D., æt. 43 years, large and muscular, occupation at time of sickness warehouseman, habits irregular and not very temperate. This man suffered with gastralgia and hepatalgia conjoined. The gastralgia in this case was due to prolonged drinking and irregularity in diet. Living on the river and holding the position he did, necessitated a great deal of exposure at night in all kinds of weather, and irregularities as regards diet. He was troubled, as in the preceding cases, with severe gastralgic attacks, the pain being at times almost unbearable. He could only be relieved by hypodermic injections of morphia in combination with other anodynes and narcotics. This being only palliative, resorted to the dilute hydrocyanic acid with the same results as in previous cases. Since he has undergone the acid treatment, he has suffered no inconvenience.

I could mention a good many more cases of a milder type, some of which only amounted to painful digestion, treated successfully as indicated, but it would be useless.

I have used the acid in conjunction with soda bi-carb and valerian, with success in dyspepsia, dependent upon a catarrhal condition of the stomach, and am pleased with it. It is not adaptable to every case, but is valuable in the majority of cases.

The three cases cited in this article were the worst I have ever seen, and indeed I cannot conceive of the disease being worse without the patient succumbing under it.

My object in writing this article is to confirm the views held by Elliotson as to the efficacy of the dilute hydrocyanic acid in the treatment of gastralgia.

Furthermore, my observations agree with his in regard to its efficacy or failure in a very short time. It is not necessary to persist in its use to find out its good effects or failure, for it is very prompt in its action. I will offer no further suggestion as to the *modus operandi* of its action, other than the one already adduced, that by allaying the morbid sensibility of the stomach, gave it time in which to perform its functions unmolested. I claim no originality in this treatment, but I desire to gain a stronger claim for the dilute hydrocyanic acid in the treatment of gastralgia.

Would like some to try it if they have suitable cases.

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ORIGINAL ABSTRACTS.

BRAIN WEIGHT AND INTELLECT.—A number of cases of large brains are being reported from time to time in the medical journals, in which the intellect does not correspond to the apparent amount of brain. Considerable light is thrown on these cases, none of which are supplemented by a microscopical examination, by the results of the histological examination of a case detailed by Spitzka (Somatic Ætiology of Insanity). The brain, in question, weighed six to eight ounces, but the ependymal layer of the brain cortex, which is totally destitute of nerve cells and is, therefore, called "the barren layer," was five times as thick as in the average individual. Quality not quantity was lacking. This case may save the various journals from making future dilettante remarks on cerebral function, worthy only of the almanacs of the patent medicine men.

TUBERCULOSIS IN CHILDREN.—Dr. H. Abelin, Stockholm, Sweden, (*Nordiskt Mediciniskt Arkir*), regards a specific contagion as the direct cause of tuberculosis, although unfavorable hygienic conditions play a predisposing part. The bronchial glands were found in each of his cases infiltrated with tubercles and cheesy material. The virus is first absorbed there and from thence it spreads. The disposition to the disease may be inherited, but not the disease itself. But congenital tubercle does not exist. His observations tend to show an intimate relation between tubercle and cheesy degeneration; in this they are not original, but confirmatory of previous observations. Tuberculosis and scrofula are not identical in Dr. Abelin's opinion. Isolation of the tuberculous children from the others is a necessary means of prophylaxis.

RESECTION OF A TUMOR OF THE COLON.—Dr. Nicolaysen (*Nordiskt Mediciniskt Arkir*, Band XIV. Number 16), reports a case of successful resection of a malignant tumor of the colon.

OSTEOTOMY.—Dr. Guerin (*Journal de Médecine de Bourdeaux*, September 24th, 1882), comes to the following very strongly put conclusions, respecting osteotomy. It should be remembered that Dr. Guerin is an extremely conservative surgeon. First, Tarsotomy or resection of the tarsal bones, for the relief of club foot, demands the condemnation of the surgeon. Second, this operation, which results in a mutilation doubly useless and dangerous from the standpoint of pedal function or form, should be prohibited, and can easily be replaced by the true orthopœdic methods of tenotomy, syndesomotomy, massage and orthopœdic apparatus. Third, though tarsotomy may be regarded as more or less excusable in the adult or in inveterate club foot, it has not yet been shown that, in view of the risks run and results obtained, it is preferable to apparatus intelligently applied. Fourth and finally, there is no reason to invoke as excuses for the blamable operation, osteotomy, the results obtained by operations for the relief of deformities resulting from tarsal disease. These applications in no respect resemble the club foot tarsotomies. The Bourdeaux Medical Society generally agreed to Dr. Guerin's conclusions with one exception.

ETIOLOGY OF HÆMORRHAGIC VARIOLA.—Dr. L. H. Petit (*Journal de Médecine de Bordeaux*, September 24th, 1882) has recently enunciated the following views on this subject, which are in opposition to those generally held, and call for investigation. The visceral alterations found in subjects dying from hæmorrhagic variola, should be regarded most frequently as causes and not as effects of this form of variola. The conditions existing previous to the disease, the various degenerations, steotosis, sclerosis, etc., should be distinguished from those which are recent interstitial hæmorrhages. Visceral lesions, producing or occasioned by a morbid state of the organism, act on variola as on traumatic lesions by modifications produced in the blood. As instances of the patients predisposed to variola may be cited those suffering from cardiac pulmonary, hepatic, or renal disease, or who have previously suffered from rheumatism, scarlatina, alcoholism, malaria, pregnancy, etc. While there is some probability in this opinion, there are as yet few evidences of it.

MYXŒDEMA.—Dr. Heurot (*Journal de Médecine de Bourdeaux*, September 24th, 1882) claims that myxœdema seems to be produced by a return to the embryonal condition of the subcutaneous, sub-mucous, or interstitial connective, under the influence of the vegetative centres, particularly of the sympathetic system and the vasculo-sanguinal glands, thereto annexed, as the pineal body and pituitary gland.

PHTHISIS WITHOUT SPUTA.—This is a by no means exceptional phenomenon among the insane, and as a rule there is no cough. Dr. Lediard, (*Medical Times and Gazette*, April 1882), reports two cases in which phthisis existed four months, ending in death without cough, expectoration, or hæmoptysis. Dr. Lediard compares the morbid process, going on in the lung in these cases, to the caries sicca of the joints.

BRAIN CENTRES FOR THE SALIVA.

It has long been known that in certain forms of insanity and in certain diseases like hydrophobia there is an excessive secretion of saliva. That a brain centre exists controlling the salivary gland has recently been shown by Bochefontaine (*Le Progrès Médical*, November 18th, 1882.) He finds that excitation of the sygmoid gyrus results in excessive salivation.

TRANSMISSION OF INFECTIOUS DISEASES TO THE FŒTUS.

Drs. Straus, Chamberland (*Progrès Médical*, November 18th, 1882) and Arloing after experimenting with the carbon bacteria, the bacteria of chicken cholera, and the septic bacteria of Pasteur find that these diseases are, in sheep and guinea-pigs transmitted by the mother to the fœtus but this transmission is not constant. Thus one fœtus of litter may be carbonized while the others escape. These experiments have an important bearing on the transmission of contagious disease from the pregnant woman to the fœtus.

LARYNGEAL ANÆSTHESIA.

Dr. Brown-Séquard (*Progrès Médical,* October 28th, 1882) finds that the local application of a mixture of equal parts of oxygen and carbonic acid produces an anæsthesia which comes on gradually, affects little by the buccal, pharyngeal and laryngeal mucous membrane, remains local in character and ceases rapidly.

BLOOD-LETTING IN APOPLEXY.

Dr. Betbeder (*Journal de Médecine de Bordeaux* November 12th, 1882) at a meeting of the Bordeaux Medical and Surgical Society raised the question of the influence of blood-letting after an attack of apoplexy. In response to this question Dr. Davezac narrated a case in which a patient who had been troubled for a long time with splenic cirrhosis and a complex cardiac affection suddenly lost consciousness for an hour. He then came to himself but had some hesitation in speech. Two hours after this hesitation increased and a slight right hemiplegia manifested itself. Fifteen leeches were applied behind the left ear and the pulse was carefully watched; within ten minutes the pulse became stronger than before, and meanwhile the hemiplegia and speech ataxia disappeared. Dr. Davezac regards this as an indication that the extravasation was directly affected, but in all probability there was no extravasation; all the phenomena narrated resulting from the influence of an overworked heart which was relieved by the blood-letting. This explanation of the case did not impress itself on Drs. Betbeder, Davezac and St. Phillipe who discussed Dr. Davezac's case from the extravasation stand-point.

NASAL NERVE STRETCHING IN CILIARY PAIN.

It is well known that the nasal nerve is that branch of the trigeminus which furnishes a sensory root to the ophthalmic ganglion from whence are derived the ciliary nerves. From the recognition of this fact, Dr. Badal (*Journal de Médecine de Bordeaux,* November 12th, 1882) was lead to stretch that nerve in two cases in which there was marked ciliary pain. The first case was one in which there was pain resulting from compression of the ciliary nerves in consequence of an irido-cyclitis the result of a traumatism. The second case was one of keratitis with hypopion and secondary atrophy of the anterior hemisphere. In both cases the operation was successful.

TUBERCULAR TENDINAL SYNOVITIS.

Dr. Terrier (*Journal de Médecine de Bordeaux,* November 12th, 1882) claims that there are three types of this form of tuberculosis. The first is the classical fungus synovitis; the second is characterized by the fact that the fungosities are limited to a certain part of the membrane where they form an abscess and ulcerate. The third form is an acute miliary tuberculosis. Treatment must depend on whether the affection be primary or secondary. If tuberculosis exists elsewhere palliative treatment only is indicated. If tubercle be limited to this manifestation then radical and curative treatment should be resorted to.

MENINGITIS IN CHILDREN.

Dr. Vovard (*Journal de Médecine de Bordeaux,* November 12th, 1882) claims that he has secured good results in the tubercular and non-tubercular meningitis of children from the internal administration of potassium iodide and the local use of oleum tiglii. The head is shaved, croton oil applied to the base, and after the pustules have appeared they are covered with pear leaves smeared with an irritating cerate. Hebra has had similar results from antimony ointment.

VACCINAL CICATRICES AND PROGNOSIS.

This subject has been of late much under discussion, and the view is much too prevalent in the United States and Europe that a single vaccinal cicatrix is all that is needed. Dr. Landrieux presents (*Journal de Médecine et de Chirurgie*, July, 1882), certain statistics which strongly support the contrary view. In 71 cases of variola, having more than three valid cicatrices, there were but three deaths. In ninety-eight cases having three or less cicatrices, there were twelve deaths. These were valid deep cicatrices. In one hundred and forty-three cases presenting more than three superficial cicatrices there were twenty-nine deaths. In one hundred and thirty-three cases having three and less superficial cicatrices there were thirty-one deaths. These figures show that the existence of vaccinal cicatrices determines prognosis in variola, and that the better marked and more numerous the vaccinal cicatrices the better the prognosis.

SORE THROAT AND SCARLATINAL INFECTION.

Dr. F. T. Bond (*British Medical Journal*, September 23d, 1882), calls attention to the relation which sore throat, occurring in exposed persons, bears to infection with scarlatina. He cites cases in which all care has been taken as regards infection from clothing, etc., yet the subject, while himself suffering only from a sore throat, has been able to communicate the disease to others. The inference drawn is that sore throats, in persons exposed to scarlatina, should be carefully examined.

IDIOPATHIC ENDOCARDITIS.

That rheumatism may affect the heart alone, without giving other evidences of its presence, has long been recognized, still the existence of idiopathic endocarditis is not looked upon as such a common phenomenon as to render uninteresting the paper recently read before the last meeting of the British Medical Association (*British Medical Journal* November 11th, 1882) by Dr. Harrison. He says that it is evident that it is quite possible to have acute endocarditis without any, or he prefers to put it, without any other symptom of rheumatism. He reports three cases in which the joint affection was absent, and there were only cardiac symptoms. The father of each patient was a victim of acute rheumatism. The mothers had never been attacked. He was of opinion that acid salicylic treatment was indicated in these cases. In the discussion of the paper, Dr. Clifford Allbutt reported some cases closely analogous to those of Dr. Harrison, and was of opinion that cardiac disease might be the only symptom of rheumatism. Dr. Balfour, of Edinburgh, was of opinion that while the paper was correct, every case of systolic murmur was not evidence of previous endocarditis, any more than a friction sound was evidence of pericarditis. Influenza might result in endocarditis. Dr. Yates, of Birmingham, said that overstrain might result in cardiac murmurs, apparently due to endocarditis. Dr. Harrison, in closing the discussion, said that while murmurs might occur, not due to endocarditis, still well-marked murmurs, attended by deviation in temperature, ascribable to no other cause, must be referred to endocarditis.

The Decrease in Deaths from Childbirth.

It is just a hundred years since the expectation of life among English women became equal, for insurance purposes, to that of men. Prior to 1772 women were compelled to pay an extra charge. At present the female expectation of life is about three years in advance of that of males.

A great factor in this prolongation of life is undoubtedly the increased knowledge and skill as regards the management of pregnancy and childbirth. There is hardly any progress in the past century which can be contemplated with such deep satisfaction as this diminished mortality rate.

Some figures recently collected by Dr. E. H. Sieveking may here be cited in illustration :

The mortality of lying-in women in London was, in 1660 to 1680, one death to 44 ; 1700 to 1740, one death to 70 ; 1760 to 1780, one death to 82.

In the Hotel Dieu, Paris, in 1786, it was one in 15.

At the beginning of the century the hospital mortality declined very much, while the total mortality also became considerably less.

In Prussia, in 1817, it was one in 112. In the whole city of London, during the years 1780 to 1820, it was one in 108.5.

From this time there has been an almost steady decrease in the death-rate of parturient women. This may be shown by a table compiled from statistics given by Sir James Simpson and Dr. Farr :

Years.	Proportion of Maternal Deaths in Childbed : England and Wales.
1839	1 in 169
1840	1 in 168
1841	1 in 170
1842	1 in 192
1847	1 in 166
1851	1 in 192
1881	1 in 263

A distinction has to be made between the mortality rate of primiparæ and multiparæ. Among 36,776 cases collected by Hardy and McClintock, Matthews Duncan and Johnson, and Sinclair, the ratio of deaths among primiparæ was one in 62 ; among multiparæ, one in 124. This is certainly too high a rate, however, to represent the present state of affairs.

We can say now that whereas one hundred years ago one mother out of every 80 died in chidbed, at the present time only one in 260 to 270 fails to survive. Obstetricians, midwives, sanitarians, all lay some claim to this prodigious advance in the saving of life. No single class or single influence, however, can be considered to have special and exclusive merit. Much is due to the advance in general knowledge and intelligence. More is due to the medical profession undoubtedly than to any other one agency.—*Medical Record.*

Foreign Bodies in the Lung.—An autopsy performed on a man dying recently in Lyons, New York, revealed the existence of a dozen shot in the left lung. At no time had there been symptoms referable to their presence, although the lung immediately around them was cirrhosed. The patient had been shot at twelve years previous, but was of opinion that none of the shot used entered his body. In this opinion the size of the shot found which were the same as those shot at him proved him to be mistaken.

Heroic Treatment of a Snake Bite.—According to a local paper an idiot confined in the poorhouse of San Antonio, Texas, was bitten by a rattlesnake on the forefinger of the left hand, the fangs penetrating both sides of the finger. About three minutes after the bite was inflicted the superintendent split the finger on both sides with a razor, poured a small quantity of powder into the wound, and set fire to it. Ammonia was locally applied and ammonia and whiskey inwardly until the the man became drunk. The next day the arm and hand were swollen three times the natural size, but the swelling disappeared and the patient completely recovered. The treatment is not by any means new.

FAITH CURES.—These appear to be the order of the day and the newspapers are full of cases of hysterical paraplegia and analogous affections cured by recourse to prayer and faith. Cases of recovery are of course, and these patients are less injured by their recourse to these harmless means of treatment, than they would be were all sorts of wild gynæcological procedures performed upon them, which produce beneficial results as long as the mental effects of the operations remain. The Rev. Mr. Barnes, of Kentucky, applies oil from a vial to the cheek of the invalid and then proceeds to cast out the disease. As might be expected, his cures surpass those of the high potency Hahnemaniacs.

NEGLECT OF HYGIENIC PRECAUTIONS.—According to the *Chemical Review*, the workmen employed in the lead trade neglect or refuse to avail themselves of the precautions devised for the protection of their health. They will not drink the sulphuric lemonade which is given them to counteract the poison; they lay aside the respirators which would prevent the dust and fumes from being inhaled. The same neglect of necessary hygienic precautions was exhibited by the file cutters of Birmingham, England, and under the circumstances it is scarcely surprising that lead poisoning is not diminishing.

THE FILARIA PARASITE.—This parasite has been found in the dog, man, and horse. In the horse it produces epileptic phenomena. In the dog it produces death, but rarely, and then only by the formation of an embolus. The animal is bisexual like the *nematoda,* among whose species are found some most dangerous and destructive parasites, and in its earlier stages it is a common infusorian in stagnant pools, gutters, and puddles of filthy water. Neither it nor the disease arising from it has been often noticed in the United States, although it is not altogether in the South and South-west. At maturity it is scarcely microscopic, exceeding in length the average of the nematoid worms to which it seems to be allied, and the translucent body of the female may be viewed crowded with beautifully arranged masses of ova. The reproduction is very rapid, the proportion of males to females being so exceedingly small that the former are difficult to obtain as microscopic objects, and few naturalists possess even a single specimen. The disease produced by it is chiefly shown in man by glandular enlargement and elephantiasis. It is common among the native Asiatics, and only very exceptionally found among Europeans. It is assumed that the mosquito plays an essential part in completing the cycle of genesis, and that, if this medium be absent, or incapable, further propagation of the parasite is suspended. Some remarkable experiments have been made in regard to these *filariæ* found in the dog with reference to the mosquito, and notwithstanding the outcry in regard to vivisection and the use of animals, Dr. Wykeham Myers, in charge of the native hospital at Takow, has been working with monkeys and mosquitoes.

A man, a native of Amoy, having

been found with the *filariæ*, was subjected to a swarm of musquitoes. He readily consented to sleep in a large gauze-covered cage, into which each night a swarm of musquitoes were introduced. Mosquitoes were bred from larvæ for his special benefit, and as they were matured were put in the netting. Care was taken that the mosquitoes which had been bred should not, after having been fed on the Amoy man, deposit their ova in the same trough where they had been hatched. A separate water-trough was made for these. Of this water containing the new ova, five monkeys were forced to drink. These animals seemed to have an instinctive dread of this water, making attempts to brush away the larvæ, but eventually, forced by thirst, they drank it. From time to time the blood of these monkeys was taken, but no signs of *filariæ* were found. Eventually, however, all the monkeys but one died, but the autopsies were barren in results. Dr. Myers believes that the Takow mosquito, instead of maturing the germ of the *filariæ*, digests it.—*Medical Reports of the Chinese Inspector-General of Customs.*

ARMY SURGEONS are often called upon to detect frauds attempted by would-be recruits, and a hint of some value as to a means in this direction is given by the *Lumiere Electrique*, which describes an electrical appliance designed to prevent conscripts practising fraud as to their stature by bending their knees. When the conscript stands erect against the measuring post the hind parts of his knees press on electric contacts, causing two bells to ring; the ringing ceases when there is the least bending. The sliding bar which furnishes the measure has also a contact which is pressed by the head, whereby a third electric bell is affected. For a correct measurement the three bells should ring simultaneously. This instrument is employed in the Spanish army.

PERSONAL IDENTITY.—The physician is often called upon to solve this question in respect to inheritance and life assurance. According to the London *Times* the thumb in China is regarded as a better means of identification than the face itself. Celestial vagabonds are not photographed for a rogues' gallery, as in this city, but their thumbs are smeared with lamp-black and pressed down upon a piece of paper, thus furnishing a rude impression, which is carefully kept in the police records. A face may be altered, say the Chinese, but a thumb never changes. While there is much that is crude and absurd in this idea, still as a corroborative circumstance it might aid the physician in arriving at definite judgment.

PATENT MEDICINES.—A Chicago daily paper says "There are now about 2400 different diseases, and every year the strain on a single patent medicine becomes harder and harder, yet the medicine stands up manfully and promises to cure them all."

MORAL ORIGIN OF PROGRESSIVE PARESIS.—This form of insanity is well known to be marked by decided physical as well as mental symptoms. As an apt illustration of the influence of a moral cause in its production, the following case is reported by Dr. Spitzka. (*Journal of Neurology and Psychiatry.*) A porter in a down-town warehouse had been promoted to a higher position, greater labor of a mental character was thrown on him; in the midst of apparent health, having been slightly "worried," he was seized with a convulsion lasting several hours, with partial consciousness; later on these convulsions occurred in groups at intervals of a week, for some months, and eighteen months after (the convulsions having been absent for a year) he died with the "quiet type" of the progressive paresis.

DELUSIONS AND EXECUTIVE ABILITY.—The *Birmingham Medical Review* reports that one of the members of the Executive Council of the Bank of Brussels was many years ago seized with the conviction that his legs were of glass, and positively refused to move. A financial crisis came, involving to some extent the bank. Mr. B. got up and went to Brussels, where by his energy and skill he largely assisted in getting matters straight. At the end of a month he returned home, remarked how marvellous it was that he had not smashed even one of his legs, and taking to his bed once more never again left it. In all lunatic asylums patients combining business ability with the most markedly fixed insane delusions are to be found.

THE KING'S EVIL.—A fact known to students of medical history, touching for the Kings evil (scrofula) was down to the time of Queen Anne a regular practice by the English monarch. The touching was accompanied by the presentation of a piece of gold. Dr. Johnston received one of these, and this has St. George and the dragon on one side, and a ship on the other. The legend of the former is "Soli Deo Gloria" and of the latter "Anne D.: G. M. BR. F.: ET. H. REG.," (Anne by the grace of God, of Great Britain, France, and Ireand, Queen.) Macaulay ("History of England") says that there were royal surgeons appointed, whose office it was to distinguish those who came for the cure from those who came for the gold. Notwithstanding these gentlemen, it appears that a large proportion came to be touched for monetary reasons. Barrington ("Observations on the Statutes") mentions the case of an old man, whom he was examining as a witness, who stated that when Queen Anne was at Oxford she "touched" him for the evil. Barrington asked him if he were really cured, upon which the old man smilingly said he did not believe he ever had the evil, but his parents were poor and had no objection to the bit of gold.

Drs. Richard Wiseman, Sergeant Surgeon to Charles II. ("Treatise on Wounds") and Dr. John Browne ("Charisma Basilicon") have left on record their opinion that persons were cured by this practice. William III. had the sense to see the absurdity of the practice, and called it a "silly superstition." Macaulay has given a very apt explanation of the cures alleged by Wiseman and Browne, when he says "It is incredible that so large a proportion of the population should have been really scrofulous. No doubt many persons who had slight and transient maladies were brought to the King, and the recovery of these persons kept up the vulgar belief in the efficacy of his touch."

THE TREATMENT OF EMPYEMA.—In an elaborate article on this subject in the *American Journal of the Medical Sciences* for October, 1882, Dr. William C. Dabney draws the following conclusions:

First.—"Medicinal" treatment, as it has been called, namely, treatment without operation, occasionally gives favorable results, but is not advisable, inasmuch as cases so treated are liable to terminate in one or other of the following ways: *a*, Sudden death; *b*, exhaustion; *c*, suffocation; *d*, phthisis; *e*, septicæmia; *f*, calcareous degeneration of the pus; *g*, secondary pneumonia and gangrene of the lung; *h*, peritonitis from the bursting of the empyema into the peritoneal cavity; *i*, amyloid degeneration of the liver, kidneys, etc.

Second.—Aspiration has given good results in the case of children, and should be tried in them before the radical operation is resorted to.

Aspiration and immediate washing out of the pleural cavity through the aspirator (Kashimura's treatment) has not been used sufficiently often for any conclusion as to its efficacy to be reached.

Third.—Free incision into the pleural cavity is usually necessary, and the best point for such an incision when only one is made is at the lowest point of the purulent collection, and directly below the angle of the scapula. Costal resection is to be avoided if possible, especially in children.

Fourth.—Continuous is preferable to intermittent drainage, because, *a*, the danger of absorption is thereby lessened; *b*, there is usually less danger of irritative fever; *c*, the empyemic cavity is placed in a better position for healing. Continuous drainage is best effected by a drainage-tube.

Fifth. — Thorough drainage is only advisable in cases where the discharge is very fetid, and where a single opening has proved insufficient.

Sixth.—The thoracic opening should not be allowed to close if more than two drachms of pus are discharged daily.

Seventh. — The danger of sudden death during thoracentesis or injection of the pleural cavity, when proper care is used, is so slight that it may practically be disregarded; but when injections are used, especial care should be taken to see that they have a free outflow.

Eighth.—Simple injections of pure water are often sufficient, but compound tincture of iodine, one part to four of water, is devoid of danger, and hastens recovery. This will usually check fetor also; but if it does not, salicylic acid or permanganate of potash in one half or one per cent solutions, may be employed. Carbolic acid is dangerous, as is boracic acid also.

Ninth. — Listerism would probably be advisable in city or hospital practice, but is of doubtful efficacy in the country, and under no circumstances should it be allowed to interfere with thorough drainage.

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TRANSLATIONS.

Caffeine in Cardiac Diseases.

By J. G. Kiernan, M.D., Chicago, Ill.

Dr. H. Huchard (*L'Union Médicale*, September 12th, 1882,) says that when digitalis is powerless or contra-indicated, it is necessary to have recourse to other remedial agents. The agent which has proven of most value in his hand has been caffeine when given in massive doses. He relates several cases in which cardiac orthopnœa was remarkably modified, and existing ascites and œdema disappeared. He began with seven and a half grains of caffeine, and carried it to twenty-two grains. His results confirm those obtained by Milliken, (*Philadelphia Medical Times*, February 25th, 1882). He comes to the following conclusions: First, caffeine is superior to digitalis in certain cases, in consequence of the rapidity of its action. Second, if the caffeine diuresis comes on rapidly it very rarely attains the proportion of the digitalis diuresis. Third, caffeine is superior to digitalis from the fact of the innocuity of action which results from its easy, rapid elimination. There is no reason to fear a cumulative action, as with digitalis. Fourth, caffeine does not produce gastric intolerance unless hepatic cirrhosis exists; fifth, digitalis is powerless or hurtful in cases where cardiac fatty degeneration exists, or, where asystole is complicated by cardioplegia. Here caffeine is of great value. Sixth, to better indicate the uses of drugs in cardiac conditions, Dr. Huchard recognizes four periods in cardiac disease: *A*. The ensystolic period where there is a lesion only and not a cardiac disease. Hygiene is imperatively indicated to the total exclusion of medical treatment. *B*. A hypersystolic period characterized by cardiac hyperbrophy. If exaggerated compensation occurs, digitalis rather than caffeine is indicated. *C*. A hyposystolic period characterized by disappearance of the compensation, enfeeblement of the ventricular systoles by cardiac asthenia or ataxia, and by all the symptoms ordinarily designated as those of asystole. Here digitalis is especially indicated. *D*. An asystolic period, the cardioplegic state of Gubler, characterized by cardiac fatty degeneration and constant feebleness of the heart and vessels. A state forming a cardiac cachexia. Here caffeine is especially indicated. Seventh, what affords an efficient demonstration of the value of caffeine as a cardiac agent is the fact that while in cardiac albuminuria, it diminishes the albumen; in non-cardiac albuminuria it has no effect. Eighth, the drug has been hitherto prescribed in too small doses. Three and a half grains to seven should be the first dose to be rapidly and progressively increased by doses of seven to ten grains, until fifteen, thirty-one, or even forty-six grains are given. This last dose is rarely needed. The caffeine (for it is this and not the salts of caffeine that Dr. Huchard uses), should be taken three or four times a day, so that the system is continually under its influence. Ninth, Dr. Huchard believes that in certain cases caffeine can be given hypodermically, and in some caffeine and digitalis should be associated, but that as yet the indications for these modes of administration are not sufficiently settled.

HYSTERIA AND ITS RELATIONS TO OTHER MORBID STATES. By DR. HUCHARD, "Journal de Médecine et de Chirurgie Pratiques," December, 1882. Translated for this Journal by J. G. Kiernan, M.D., Chicago, Ill.

It is evident that in certain cases the existence of a neuropathic diathesis may imprint on many diverse diseases such singular symptoms as will embarrass the clinician. It may thus occur that hysteria combined with other morbid conditions may give rise to symptoms that tend to create the belief in a non-existent grave complication. A patient entered the Lenon Hospital for a slight typhoid fever, she was a girl of sixteen. The second day after admission it was noticed that the skin was so hyperæsthetic that the patient could not be touched without awakening sharp pain. The cervico-dorsal spinal apophyses were so painful, and the vasomotor phenomena were so well-marked, that by tracing on the skin the well-known meningitic toche could be obtained and it would have been pardonable to make the diagnosis of a grave nervous lesion. But, from the first day, these apparently grave symptoms contrasted singularly with the benignity of the disease, the relatively normal temperature, and the absence of contractures, stiffness of the neck, pain in the head, etc. The typhoid fever followed its regular course with moderate symptoms, and it was finally possible to bring these pseudo-meningeal symptoms into relation with the neuropathic condition of the patient, who manifested from time to time the purposeless crying and laughing, and the globus characteristic of hysteria. From this time it was believed that the nervous symptoms were of hysterical origin, which opinion was further justified by the phenomena presented during convalescence. The hysterical phenomena still further increased then, but the hyperæsthesia of the skin disappeared, and was replaced by a sensitive and sensorial anæsthesia of the left side, with hyperæsthesia of the left ovary. This ovoralgia became thus a diagnostic, and clearly separated this case from those described by Calmette, where hemianæsthesias of congestive origin occur during certain cases of typhoid.

This case illustrates the curious fact that typhoid fever has been the occasion of calling forth hysterical phenomena under the guise of troubles of sensibility. In other cases troubles of motility are predominant. Certain cases have been observed where ataxias due to hysteria have appeared during typhoid fever, and have led to a serious prognosis.

The hysterical phenomena thus called out may show themselves as consequences of inflammatory phenomena, which are then accompanied by spasms, and more or less intense localized phenomena, simple anginas, or bronchitis may develop, among hysterics, with very remarkable facility — stricture of the œsophagus, or spasms of the glottis, aphonia, racking, strident, or sonorous coughs, against which medication is of no value. A simple indigestion, or a gastric derangement may become the cause of obstinate vomiting which does not impair the health of the patient, which proves rebellious to all treatment, and may cease suddenly without any treatment at all. Sometimes an hysteric is attacked by metritis, or simple uterine congestion, and there immediately appear symptoms of peritonitis, with tympanites, cutaneous abdominal hyperæsthesia, and even vomiting, although no fever exist. It is in reality only a pseudoperitonitis, for this storm soon passes, and everything is in order.

These and similar cases show the influence which local disorders have in "the fixation of hysteria."

Traumatism as a cause of local hysteria has already had attention called to it by Brodie and Charcot where insignificant traumatisms, a slight prick even, have proven the point of departure of contractures whose abrupt, sudden disappearance has been sufficient evidence of their hysterical character.

In predisposed individuals, or when hysteria develops in childhood, it comes on most frequently subsequent to a traumatism (fall, contusion, slight cut, etc). One of my patients received a punch in the epigastrium and immediately after had an hæmatemesis which repeated itself a great many times. It was at first thought this resulted from a gastric ulcer of traumatic origin, but it showed itself always at the menstrual period, persisted in abundance during eight months without impairment of the general health, and finally, after defying all treatment, suddenly disappeared without cause, to give place to convulsions of clearly hysterical origin. This, sufficient for a diagnosis, which was readily based on two elements of the case; the appearance of the hæmatemesis at the menstrual epoch, and the preservation of the general health and *embonpoint* despite the very abundant and frequently repeated hæmorrhages. In this case hysterical crises which came on latterly were sufficient to establish the already given favorable prognosis.

Rheumatism and hysteria, which seem to have numerous affinities, can at times exercise a remarkable reciprocal influence. There are many cases in which hysteria presented, as regards the cutaneous surface and different organs, hæmorrhagic manifestations that, when the patient is really suffering from rheumatism, might readily be considered to be of that origin. But, beside this, there is often seen a sub-acute articular rheumatism with a febrile reaction, only slightly above normal, in which presents apparently great gravity or intensity, owing to the hysteria awakened by the pain and effusion of the articulations having determined a hyperæsthetic condition of the skin and contraction of the peri-articular muscles. This cutaneous hyperæsthesia and contraction may remain for months in a joint and then suddenly disappear without cause and without leaving aught to interfere with the play of the joint. Syphilis and scrofula have equally important relations to hysteria, and this is the case also with malaria, which sometimes imprints upon hysterical phenomena a really periodic character, or which may produce hysterical neuralgias of an especially painful kind.

The relations existing between tuberculosis and hysteria are perhaps the most important, without discussing the reality of the antagonism claimed by Leudet to exist between hysteria and phthisis, in which the phthisis controls the convulsive phenomena, these in turn control the phthisis. It can easily be shown that the union of these two diseases in the same person changes very markedly the typical course of phthisis. In a phthisical patient arrived, for example, at the second stage of the disease without any marked phenomena, there may suddenly occur a strident racking cough of a peculiar kind; later a sudden aphonia, then hæmoptyses recurring at the menstrual epoch; neuralgia of the intercostal spaces; hyperæsthesia of the thoracic parietes; painful spinal prominences; anorexias persisting for months and years, of an obstinate, invincible character. If these symptoms were simply placed in apposition, an exceedingly grave prognosis must be given; if they be analyzed the gravity disappears. These vomitings, menstrual hæmoptyses, and this strident rhythmical cough, the aphonia so abrupt in its apparition, do not impair the patient's general condition. In spite of the apparent gravity of the symptoms, the disease has made but little progress. These symptoms are due to hysteria localized in the respiratory apparatus.

Beside these phenomena others markedly different make their appearance when phthisis attacks a patient already hysterical. The disease pursues its usual course, but modifies or suppresses already existent hysterical phenomena, hemi-anæsthesia, etc.

Sometimes among the hysterics the diagnosis of tuberculosis may be made where this disease is not existent. A patient now in service has been under observation eight months, and I have been in doubt as to the nature of the disease for an equally long period. This patient entered the hospital for a gastric affection, for which he had been treated for a long time by an able physician. Vomiting had existed for more than a month. Almost every day the patient vomited abundant biliary matter, mixed at times with food. The anorexia was accompanied with gastric pain. Gastritis was suspected from the patient being an alcoholist, but treatment had little if any result.

Latterly, as the gastric symptoms seemed to come in paroxysms, it was thought possible that they might be the precursors of a spinal disease.

These vomitings continued for a long time and then suddenly and apparently causelessly stopped. Then the patient commenced to have a dry cough, somewhat painful and sonorous, but without expectoration. The left thoracic parietes was then the seat of a very vivid cutaneous hyperæsthesia. There was hurried respiration on both sides of the chest, more feeble on the right, and slight dulness over the right apex.

In presence of these symptoms the diagnosis of a beginning tuberculosis was easily made, when the patient, having an attack of hysteria, compression being made of the left testicle, whereupon most of the thoracic phenomena disappeared. After a while he had other convulsive phenomena, which finally disappeared. He went out of the hospital, and returned twice, having marked pulmonary phenomena, which came and went capriciously. For these reasons in the present case I believed myself justified in making the diagnosis of hysterical pseudo-tuberculosis.

Hysteria thus masks almost every disease.

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SELECTIONS.

TWO NEW AND SIMPLE METHODS OF REDUCTION IN DISLOCATIONS OF FEMUR. By J. E. KELLY, F.R.C.S.I., M.R.I.A.

Several years ago a patient, aged about 50, suffering from a dislocation on the dorsum ilii, was admitted into Jervis Street Hospital. He was a remarkable man, having gained by his prowess the title of "King of the Quay Porters," a body distinguished for their strength and endurance. My colleague, a gentleman of the highest attainments, on three occasions consulted with the staff of the hospital, and with other eminent surgeons, including the late Mr. Adams. Guided by his personal knowledge and the suggestions of his friends, he caused special apparatus to be constructed, from which he expected increased facilities, and ineffectually tried every recognized method of reduction. At the last consultation I obtained permission to test an expedient which had occurred to me. I fixed the patient's pelvis firmly to the floor, and standing over the limb, I flexed it, and placed his foot between my thighs; then passing my forearms under his knee, I made vigorous traction upward, when, to our great relief, I effected the reduction.

By this favorable result and a successful experience of more than six other cases, in some of which many methods were tried, I have been enabled to develop the details of the procedure, which I shall now describe. Three strong "screw hooks" are inserted into the floor close to the perinæum and each ilium of the patient, and to those hooks he is secured by a strong bandage of rope. The injured thigh is flexed at right angles to patient's body; the foot and lower extremity of tibia are placed against the perinæum of the surgeon, who, bending forward with his knees slightly flexed, passes his forearms behind the patient's knee, and grasps his own elbows. He is now in the best position to accomplish the reduction. With this object he exerts his strength to draw the femur upward, which action is generally sufficient to effect it; but, when necessary, circumduction may be combined with extension, as the surgeon, while maintaining traction, sways his body toward the patient's uninjured side, then toward his head, then outward, and stepping backward, he lays with a sweep the injured limb by its fellow, and thus the dislocation is reduced. In ischiatic dislocations a bandage, upon which an assistant may make traction, can be passed round the thigh close to the trochanter, and may be useful for the purpose of liberating the head of the bone from the sacro-sciatic foramen.

While analyzing this measure, I shall contrast the facilities afforded by it and by the other methods of reduction for making extension, counter-extension, and coaptation. In femoral dislocations the application of extension is more difficult than in humeral luxations, owing to the dimensions of the limb, which render the grasp of the surgeon almost useless; while the clove hitch and other appliances are notably insecure when placed above the knee, over which they slip with great facility. When the traction is applied to the ankle much of the power is lost, owing to the length of the intervening limb, and the great advantage derivable from the application of the leg as a lever to rotate the femur is forfeited. In my method the extension is applied in the most approved direction, and with the greatest economy of force, as the muscles of prehension are hardly called into play, being only required for the slight effort necessary to fix the hands on the elbows, while the forearms are flexed by their numerous and powerful muscles, and the patient's leg is kept in position by being a lever of the third order, and its displacement, owing to the unfavorable point to which the power is applied, would require a force of over a thousand pounds. Extension, when derived from many assistants is awkward and obstructive; and when it has a mechanical source it is still less desirable, being rigid, unmanageable, and dangerous; it can only be applied slowly, and in a fixed direction; when in action its effects cannot be estimated until, perhaps, much mischief is done; and when the surgeon wishes to know if his effort be successful, he can only ascertain this by relaxing the tension, which can but be effected, slowly, by reversing the pulley, or, in a violent and tumultuous manner, by the iterposition of some of the ingenious and well-intended instruments constructed for the purpose. The agency which I would substitute is ample, under perfect control, and sustainable, if necessary, for a considerable time, being derived from the most powerful muscles of the body—namely, those of the back, the shoulders, and the lower extremities. It is an adaptation of the feat termed by athletes " raising" or " lifting a weight," which affords the most powerful example of human dynamics—reaching, in some instances, to 800 or 1000 lbs., the average being from 300 to 500 lbs. —a force which, if mechanical, the careful surgeon would rarely exceed. Again, as the grasp of the gymnast is one of the limitations of the exploit, my method, which minimizes this function, economizes a certain amount of muscular energy, which possibly may be utilized in increasing the lifting power of the operator. The counter-extension is simply one limited by the strength of the floor, the hooks, and the bandages of rope. The boards are secured from being displaced by the fact that in addition to his own weight the operator transmits to them a resistance equal to the power he exerts. The thread upon the screws should be deep, that they may not be easily torn through the boards, and they should be inserted at an angle obtuse to the body of the patient, as thus they afford the greatest resistance. The coaptation which I propose is a combination of the principle of vertical traction, accidentally discovered by Dr. Allen, of Vermont, while lifting a patient into bed, and termed " automatic reduction," and of the " manual method " of Hippocrates and Paulus Ægineta, which has been formulated in Europe by Després and Pouteau in the words " flex, abduct, and rotate"—the greatest prominence being given by them to " abduction," while Reid and Bigelow in America use the terms " flex, abduct, and evert "—Bigelow regarding " flexion" as the most important motion. " Reduction by manipulation," which includes all those refinements, must be adapted to the multiformity of dislocations, and due prominence given to that element or constituent of the manœuvre which is best adapted to the characteristics of the case. Another factor in coaptation is the rotatory force exerted on the femur by the lateral motions of the leg, acting as a lever, commanded at its upper extremity by the arms and at the lower by the thighs of the surgeon. This is a power capable of great utilization.

For anterior luxations I propose the following: Patient is placed on his back on a bed or table of such an elevation that his pelvis is nearly as high as the trochanter of the surgeon. A bandage passed round the pelvis, and secured on the side of the table or bed furthest from the dislocation, affords sufficient counter-extension. The surgeon, with his face directed toward the dislocated joint, stands on the inner side of the injured limb, with his trochanter pressed firmly against the femur; bending the leg behind his back he grasps the ankle with the corresponding hand, and is in the position to effect the reduction. He now rotates or turns his body away from the patient, thus making traction on the femur in the most favorable direction, and, at the same time, pressing its head toward the acetabulum. I have already considered the mechanism of this expedient in my former paper. The operator has one hand disengaged for the application of minor manipulation if it should be necessary.

I wish most distinctly to disclaim any intention of proposing a substitute for that great triumph of modern surgery, the treatment of femoral dislocation by simple manipulation during anæsthesia; but most surgeons of experience have encountered instances of its failure, even in the most skilful hands. In such cases I claim many advantages for my methods, which afford other avenues of escape from that true opprobrium of surgery, an unreduced dislocation. They also promise to render the surgeon independent of anæsthesia, assistants, and mechanical power, as in several of my cases I have reduced the dislocations without aid from any source.—*Dublin Jour. Med. Sci.*, October, 1882.

THE OPIUM HABIT, ITS SUCCESSFUL TREATMENT BY THE AVENA SATIVA (?)—The remedy to which Dr. Sell ascribes such remarkable properties (*New York Med. Gaz.*, April 22d) is a tincture of common oats. He begins by telling us that it is a very important grain, and then gives us a long history of its cultivation and uses from the time of Pliny to the present day. He discourses, too, at some length on the value of water-gruel and oatmeal tea. He next tells us that in 1874 Dr. Keith "had a concentrated tincture of the avena prepared for paralysis, from the effects of which he himself suffered for three years and a half, and in three weeks, having taken the avena in fifteen-drop doses three or four times a day, he was not only free from paralysis, but relieved from many serious symptoms, both mental and physical"(!) The author commenced his own observations with the concentrated tincture before hearing of Dr. Keith's case. He is convinced that it is "a most useful and reliable remedy." He finds that it is "diuretic, slightly laxative, tonic, stimulant, but especially nerve-stimulant." It is said to "exert a most powerful influence upon and through the nervous system." It is "a valuable adjuvant to other medicines," is unsurpassed in "female diseases," is "an excellent substitute for intoxicating drinks," "will cure inebriety," is "an antidote to opium-poisoning" (!) It gives relief in insomnia, and is curative in nervous headache and prostration due to mental strain and worry, and also in neuralgia and hemiplegia. "Epilepsy has been brought under subjection by it more effectively than by other remedies," and it is unequaled in the treatment of "hysteria, melancholia, neurasthenia, and all forms of nervous prostration, whether caused by inebriety, the abuse of tobacco, opium, or morphine, by sexual excesses, masturbation, or mental strain." But this is not all, for the author has made what he describes as "a no small discovery in therapeutics." He finds that this remedy is an absolute cure for the opium or morphia habit. He gives details of three cases of morphia-taking, all of which were promptly cured by his remedy. The first patient, a German, of middle age, usually took hypodermically in the twenty-four hours from 12 to 48 or 50 grains of morphia, which had no other effect than to produce fifteen minutes sleep with the eyes wide open. The next patient, a middle-aged lady, had been a slave of the morphia habit for seven years, and usually took 12 grains a day. In the third case, morphia had been taken to excess for twenty years, the average being an ounce in fifteen days, or 32 grains a day. The avena in all cases works wonders. The patients are not only able to relinquish the habit, but improve in weight, strength, spirits, and mental capacity. One lady not only gained twenty-five pounds in weight in an incredibly short time, but said she felt twenty years younger. It is stated in the most positive terms that the preparation is nothing but a tincture of common oats. The dose is to be increased till it produces "the desired effect," and is to be given in hot water, "with the same frequency that the patient was accustomed to take his opium or morphia." The author displays *great originality, and his powers of imagination are remarkable.*—William Murrell, M.D., in *The London Medical Record*, 1882.

[*Note.*—Dr. Murrell may have truly said, not only that Dr. Sell's powers of imagination are "remarkable," but that in the language of Dominie Sampson, they are "prodigious." One must indeed be daftly enthusiastic or a professional idiot to believe such stories and such stuff about oats!—Ed.]

AN ADDRESS ON THE ANTISEPTIC TREATMENT OF DISEASES OF THE LUNGS. DELIVERED AT THE INAUGURAL MEETING OF THE WEST LONDON MEDICO-CHIRURGICAL SOCIETY. By I. BURNEY YEO, M.D., F.R.C.P., Physician to King's College Hospital, etc.

Gentlemen: When your secretary, Mr. Keetley, did me the honor of inviting me to bring before this Society the subject of the Antiseptic Treatment of Pulmonary Diseases, I confess I at first hesitated to accept that invitation. I felt that although I had given some attention to the subject my time was at this moment so fully occupied that I should not be able to deal with the subject so fully and completely as its importance merited, or as was due to a Society so learned and influential as yours. I also felt that it was a subject which was only just beginning to be looked at from something like a firm scientific standpoint, and that from this point of view the question of the antiseptic treatment of diseases of the lungs was in its initial stage—a stage certainly full of suggestions for future investigation; but the work of examination, of experiment, of comparison, of testing, and of criticism—serious, helpful criticism—for the most part has yet to be gone through. It might then, I thought, seem premature to introduce this subject to this Society for discussion in its present stage; but when I reflected on the intrinsic importance of the subject itself, when I thought of the vast interests, direct and collateral, involved in its discussion, and of the power and influence the members of such a Society as this would possess in collecting evidence bearing upon it, I yielded to your secretary's request, relying on your kind indulgence to excuse the merely suggestive character of this address and the many short-comings and defects which future research alone can supply. It is remarkable when we begin to look into the history of almost any subject, how little there is that is new in its facts and its phenomena. What is new resides in our mode of regarding them, our comprehension of them, our application of them. The truth is always there in the facts and phenomena of nature, but it is often only discovered after ages of observation, of experiment, and of opposition. Of opposition: how remarkable is this spirit of opposition! how remarkable has it been in the history of one of the latest and greatest triumphs and discoveries in the art and science of surgery, the antiseptic system. As if the work of discovering truth in this universe was not hard enough, men are perpetually encountering from their fellow-men the most ardent opposition in this task. In proof of what I say I need only point to the present agitation on the part of a well-known Society against all experiments on animals—a Society which, reversing the exclamation of the dying Goethe for "more light," might be fittingly designated "The Society for the Maintenance of Darkness."

The idea of an antiseptic treatment of pulmonary diseases is certainly *new* in our present mode of regarding it, in our comprehension of the phenomena with which it is concerned, and in the extended application which we propose to give to it. But the thing itself is not new, the phenomena are not new. The adoption and the success of antiseptic methods of treatment of pulmonary affections have been recorded again and again, and they have, again and again, met with opposition, and not rarely with a sort of sneering contempt. This, gentlemen, you may be satisfied will never be the case again, and for the following reason. Hitherto, or till quite lately, such efforts were empirical, and without any strictly scientific basis, but now our antiseptic methods are founded on scientific knowledge—on principles, principles that have been evolved from a series of most patient and at the same time most fruitful investigations, which will go far to make this latter half of the nineteenth century the most illustrious in the history of medical science. A very few historical illustrations will suffice to prove what I have said about the antiquity of the fact of the antiseptic treatment of pulmonary affections. Hippocrates and Galen used to advise the inhalation of balsamic vapors in pulmonary affections, and the latter used to recommend phthisical patients to settle in the vicinity of Vesuvius and Etna, where they could inhale sulphurous vapors as well as sea air. But we will confine ourselves to the history of pulmonary therapeutics during the last hundred years, and one of the most noticeable facts in this period is the frequency with which tar vapor has been advocated as of great value in the treatment of lung diseases. Dr. Rush of Philadelphia in 1787, Dr. Beddoes in this country, about the same time, and Sir Alexander Crichton in 1817, all stated that they had met with great success in treating cases of phthisis by inhalation of the vapor of boiling tar, and Dr. Solis Cohen, in his excellent book on "Inhalations" in connection with this testimony, says: "The use of tar vapors in phthisis deserves to be fully and systematically studied, so that safe indications may be laid down as to the character of cases to which it is most applicable." Between 1819 and 1830 the French physicians Gannal and Cottereau, and Sir James Murray in this country, reported excellent results from the treatment of cases of phthisis with dilute chlorine vapor. One of these had noticed that the workmen in bleaching factories with chest disease visibly improve, and another reported thirteen cases of phthisis cured by inhalation of chlorine, and Louis in Paris, and Dr. Elliotson and A. T. Thompson in London, spoke well of it.

In 1835 Sir Charles Scudamore became an enthusiastic advocate for the inhalation of iodine vapors in phthisis, and after ten years' experience of its use he expressed himself as convinced of its remedial power. Piorry (between 1850 and 1860) also was an advocate for the continuous inhalation of iodine vapor in phthisis, and for this purpose he used to have several saucers containing iodine placed about the patient's pillow. He treated thirty-one patients in this way for two years; twenty were decidedly benefited, both as regards symptoms and physical signs; in seven cases both symptoms and physical signs disappeared, and four cases died. Later still Skoda used inhalations of the vapor of turpentine with much success in phthisis, pulmonary gangrene, and in catarrhal affections of the air passages.

I have selected these few illustrations almost at random from the history of pulmonary therapeutics to prove to you that I was right in saying that there is nothing new in the facts, and they also go toward disproving the statement that I have lately seen made by one or two writers in the journals of the small amount of success that has attended the antiseptic treatment of phthisis.* I suppose I have as much right to speak on this subject as any of those writers, for during ten years I saw personally over 27,000 applicants in a hospital devoted to the treatment of this affection, and of all the methods of treatment of which I have had any knowledge or experience, those into which some antiseptic measure entered as an important element were certainly attended with the best results. The difficulty, however, always was to secure anything like a proper application of an antiseptic agent ; and after trying various devices for this purpose, I at length devised a very simple method of continuous inhalation, which answers the purpose better than any other with which I am acquainted. I have described this elsewhere,† and you can examine the specimens of the little apparatus I have devised for this purpose that are on the table.

Let me here make a remark which as practical men you will at once see the force of. It is useless to attempt to test any method of treatment by applying it to cases of advanced phthisis. In such cases the mischief is done. No antiseptic agent will cause numerous suppurating cavities to close up and heal, or replace lung tissue that has been destroyed by progressive ulceration and disintegration, or remove extensively disseminated tubercular and inflammatory infiltrations. And yet how many cases of phthisis come before us already in this state. It is greatly to be regretted that certain physicians should ever have pretended to have cured such cases, and that others should seriously have tested their statements by the application of any special method of treatment to cases so advanced and so hopeless. In order that any case may be cured by any method of treatment the first and essential condition is that it should be curable. And cases of phthisis too often come for the first time under our observation long after the possibility of cure is passed. But the question for us to examine and to satisfy ourselves about now is this, Is an antiseptic system of treatment applied to lung diseases true in principle ?

If we can convince ourselves that the principle is a true one, modes of application and developments in practice will be certain to follow. In the first place, then, let us inquire, What is antiseptic treatment ? Antiseptic treatment applied to the lungs is one or both of two things : First, it is the prevention of a hurtful, poisonous (septic) agent getting to the lungs from without ; and, secondly, it is the destruction, or the limitation of the action of a hurtful poisonous (septic) agent already within them.

And now let us ask ourselves if there is any *à priori* reason why it should not be possible to satisfy both these indications. It was argued warmly not many years ago, as a necessary preliminary to this discussion, that it was impossible to bring medicinal agents into contact with the pulmonary surface by inhalation. That argument has been abundantly disproved by the most varied and elaborate experimental investigations.*

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* In my recently published Lectures on Consumption I have collected a mass of contemporary testimony in favor of this treatment.

† Lectures on Consumption. London : J. & A. Churchill.

So, then, supposing a hurtful septic agent to exist in the lungs--and in phthisis the presence of such an agent has been demonstrated beyond all question, and its virulently septic quality established—the problem of the antiseptic treatment is this: Do we possess, or can we discover, any agent which we can convey, in the form of gas, vapor, or solution into the lungs which shall be inimical to the life and activity of this septic body? Or can we place our patient under any possible conditions of life which shall prove hostile to its growth and development? It would be illogical and absurd in the extreme to deny the possibility of such a method, or of the discovery of such an antiseptic agent, if we do not already possess one or more. The second indication must therefore be admitted to be quite possible. Now, let us turn to the first indication. It is not only necessary to destroy any septic agent that may be already in the lungs, but we must be able to prevent septic agents from entering them with the respired air. Now, this may be accomplished in two ways: (1) We may place our patient in an atmosphere which by examination we know to be absolutely pure and free from septic particles; or (2) we may diffuse through the air he breathes an agent hostile to the life and activity of any septic particles there may be in it. This, again, is a true antiseptic treatment, and it is certainly possible in either of these two forms. If then we limit ourselves (which we had better do on this occasion) to the consideration of the treatment of phthisis, we have two things satisfactorily proved. First, there does exist a hurtful specific septic agent in the lungs. Second, an antiseptic treatment is possible. There is no beating the air in this. Gentlemen, we are here on sure and certain footing; we have reached a principle. This is only the first stone of the edifice we have to build, but it is the foundation stone. The next thing for us to do is, by patient labor in the way of observation and experiment, to apply this principle. Our object is to discover what agents there may be within our reach capable of being administered without inflicting injury to the pulmonary tissues, which may have the power of destroying or neutralizing or arresting the activity of the septic organism, which seems to be the operative cause in the origin and propagation of phthisis. I am disposed to believe that other common forms of disease of the respiratory organs have a septic origin also, and call for antiseptic treatment, but we must for the present concentrate our attention on this subject of phthisis.

Already we have abundant and incontestable proof that pure air—pure, cool dry air, in unlimited amount—is such an antiseptic agent. Wherever such air is found—on the high tableland of Mexico, in the elevated valleys of Switzerland, on the Kirghiz steppes of Asiatic Russia, in the pine forests of Central Germany, and on the open sea—wherever men live a life in the open air, away from the emanations of cities, and from too close contact with humanity—in all such places we hear of consumption becoming arrested and cured. The bacillus tuberculosis seems to love hot, moist air, and air freely charged with the exhalations of humanity; warmth and moisture seem to provoke it into special activity, while dry air at a comparatively low temperature seems to be inimical to it. Whoever has watched, as I have done, a large number of cases of phthisis in this country, must have been struck with the frequent occurrence of rapid advances in the disease during the first warm moist days of spring and early summer.

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* Vide Oertel: Respirator schen Therapie.

And here again I am tempted to quote a passage to which my attention has been recently called by my friend, Dr. Frank, of Cannes, to show how true it is that the facts we are discussing are not new. It occurs in a very able book by a German writer, "Hausrath on New Testament Times," an English translation of which has been published by Williams and Norgate. He is alluding to the mountain air of the fortress of Masada, a mountain fortress on the borders of the Dead Sea, where John the Baptist was imprisoned. There he says, Josephus tells us provisions retained their freshness for over 100 years "because the air at the altitude of the fortress was purified from all earthly and corrupt particles!" It is precisely such air—air purified from all "corrupt particles"—that we require for our phthisical patients; and if we cannot send them where such air is naturally found, we must artificially create for them an antiseptic atmosphere which they can breath where they are; and if we are to perpetuate consumption hospitals, it is with such an atmosphere we must fill them. But the time will probably come when instead of crowding a number of consumptive patients together in the centre of a populous district of a crowded city, we shall acquire for the same purpose a good-sized pine wood with a dry subsoil a few hundred feet above the sea-level, and build a certain number of scattered cottages through the wood, and hang up a number of hammocks between the fir trees and send our consumptive patients there to be aired into health! In wet weather they would make up fires of fir wood and pine cones, and so fill their cottages with balsamic and antiseptic vapors; and with open windows and a dry soil they would find the wet weather less injurious to them there than in towns. But we have other antiseptic resources more manageable than a pine wood. And here let me call your attention to the peculiar anatomical conditions of the respiratory organs, by which they are rendered peculiarly prone to septic attack, and specially needing of antiseptic defence. The lung is the only deep-seated internal organ in the body which is freely accessible to the surrounding air. Perpetually the outer air is passing in and out of the lung, and thus septic particles in the air can readily reach the pulmonary surface, which is most richly supplied with absorbent vessels. But if, owing to the anatomical disposition of the parts of the lung septic bodies can readily reach it from without, for the same reason antiseptic particles can also be readily brought into contact with it, either in the form of gas or vapor or fine spray and mist or even fine solid particles.

It is needless to offer you any proof of this. You will, I take it, all accept this statement as proved; and you are no doubt familiar with various forms of apparatus devised for the purpose of carrying out such applications. But though we may sterilize or destroy in this way such germs or microbes as may commonly occur in the surrounding atmosphere, and so purify and render harmless the air that passes in and out of the lungs in respiration, it does not follow that the agents we now know to be germicides, such as carbolic acid, eucalyptol, thymol, etc., and which are used by surgeons on account of that property, are necessarily destructive of the tubercle bacillus. Analogy would lead us to conclude they might be, and the experience of their use in the hands of many competent observers,* tends to strengthen this view. But we must not rest satisfied with this ; we must pursue our studies of the life history of the tubercle bacillus until we have discovered what is the particular agent or agents which are especially inimical to its development and activity.

There is another difficulty which we must be prepared to encounter—the difficulty of inducing patients to submit to a continuous process of disinfection. It is by no means easy to induce phthisical patients to wear, almost continuously, even so light and simple an appliance as the one I have shown you, and it would be infinitely more difficult to get them to inhale a spray for many hours a day, supposing it should be discovered that the best antiseptic is soluble in water but not vaporizable at ordinary temperatures, as was the case with the benzoate of soda of which so much was expected by some. But I believe this difficulty would almost entirely disappear if our knowledge became absolutely precise, and our confidence in our remedy completely assured. If we could say to our patients "by this means you will be cured, and by no other," this difficulty would, I am persuaded, almost cease to exist. Hence, however, we see the obvious advantage of being able to remove our patients to an antiseptic atmosphere where they cannot help inhaling the curative agent continuously.

And now I must bring these merely suggestive observations to a close. In the foregoing remarks I have chiefly endeavored to show that the idea of an antiseptic treatment of lung diseases is based on scientific data, and that in principle it is established as a truth. What lies before us is to overcome the difficulties in its application. We should be encouraged in this work by the thought that whatever progress we are enabled to make we shall be furthering the laborers of the great experimental pathologists of our times, the labors of men like Pasteur, Koch, and Lister. It is not given to every one to be enabled to work with a genius and an energy like theirs. But let me remind you that one of them—Koch—was a country doctor, a general practitioner, like many who are here tonight ; and we may all do something toward transferring the influence of their intelligence and their genius, and in applying the fruits of their labors to the practical daily duty of healing the sick ; and in spite of much disingenuous misinterpretation and foolish abuse we may be able to prove to the world that experimental pathology is in the very highest degree beneficent and philanthropic. For the first time we seem to have grasped a principle in the treatment, both preventive and curative, of a class of diseases which we have hitherto regarded almost with despair. Let us steadily work on the foundation which this principle supplies the successful application of which must be attended with immense service to humanity and lasting honor to medical science.—*Brit. Med. Jour.*

A CASE OF A HIGH TEMPERATURE IN A HEALTHY YOUNG LADY.

Dr. D. Julio Ortiz Coffigny, of Matanzas, relates in the *Chronica Medico Quirurgica*, of Havana (May, 1882), a very curious phenomenon of a young lady, twenty years old, apparently enjoying in every respect good health, whose temperature is consequently several degrees above the normal.

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* Lectures on Consumption, Appendix to Lecture 2.

This fact was first noticed by the young lady herself in January, 1881. One day while nursing her sick sister, she had the idea to take her own temperature, and found it as high as 38 degrees centigrade (100.1° F.) She notified it to Dr. Llorach, who was attending her sister, and who observed the same temperature.

Lately Dr. Ortiz Coffigny took a great interest in this case, and the following is the result of his observations during eight consecutive days :

	Temperature under the axilla.	Temp. in mouth.	Pulse.	Resp.
At 8 A.M....	38.7 Cent. (101.6F)	39. (102.2F)	100	24
At 1 P.M.....	39.5 Cent. (103.1F)	39.8 (103.6F)	120	28
At 5 P.M....	39. Cent. (102.2F)	39.2 (102.5F)	100	24
At 9 P.M.....	39. Cent. (102.2F)	39.2 (102.5F)	100	24

As these ciphers have been found constant during the eight days, there is every reason to believe that this febrile temperature is a normal physiological fact in that young lady.

This observation, gentlemen, is of the greatest importance ; it reminds me of another observation of Pasteur, and suggests some ideas, on which I want to call your attention.

While the great scientist was making his experiments on carbuncle, and preparing the cultures for its inoculation, one of his most bitter opponents, whose name I do not remember now, told him, that he would never be able to inoculate carbuncle in chickens. In fact Pasteur tried the inoculation in these animals, and no carbuncle was produced. Puzzled at such a negative result, he wanted to know the cause ; he had the idea of taking their temperature, and found that it was several degrees higher than the other animals. He soon argued, that this must have been the cause. By some ingenious means he reduced the temperature of the chicken to the level of the other animals, on which he was experimenting ; he inoculated then the virus, and the carbuncle appeared.

Here is a fact of a high temperature causing in the chicken a peculiar idiosyncrasy, that gives it immunity from carbuncle—there is another poison (atropia, if I am not mistaken) that does not affect the chicken, probably due to the same cause.

Now let us apply this principle to the human race, and let me ask you, what is idiosyncrasy? what is the cause of this idiosyncrasy, or predisposition, of which we are talking every day in our practice?

Why a contagious disease, *e.g.*, scarlet fever, attacks the different members of the same family in different ways? While one is stricken by the poison with such a violence as to die sometimes in twenty-four hours, another has a slight fever with a little rash curable in a few days, and another gets nothing?

The cause of all this may perhaps be found in the peculiar temperatures of each individual.

Ninety-eight and a half degrees Fahrenheit or thirty-seven centigrade is acknowledged to be the normal temperature of man. Are we sure that this cipher always represents the normal temperature of every person? The fact just related of the young lady of Cuba proves, that there are some exceptions ; and these exceptions may be more frequent than we suppose.

My own temperature is fully nine tenths of a degree above the normal ; it was ninety-nine and two tenths (in the mouth) yesterday before my dinner. During the epidemic of 1878, I took several times my temperature, and it always was above one hundred. These exceptions ought to be known by the physician. In this age of ours, of progress and scientific investigation, it should be advisable that every physician have the record of the in normal temperature of all his clients, order to compare them, when they are sick; by this way we may perhaps be able to resolve the problem of idiosyncrasies. We are discovering every day new organisms as the causes of diseases; but after all the parasite, the germ, the bacterium, the bacilli, does not constitute the disease, it only becomes disease when it finds in the soil, in the blood, the proper elements for its developments, and for this work temperature must play the most important part.—*New Orleans Med. and Surgical Journal.*

PNEUMO-URIA. By E. L. KEYES, M.D., Professor of Cutaneous and Genito-Urinary Diseases in Bellevue Hospital Medical College; Surgeon to Bellevue Hospital, New York.

Surgeons are for the most part in accord in believing that when gas is found within the human bladder its presence there is to be accounted for only by assuming that it has been introduced from without, through the urethra, or through a vesico-intestinal fistula, or that it is due to decomposition of the urine, or of blood-clot in the urine.

That a gas resembling air, colorless, sweet and pure, not ammoniacal, not sulphuretted hydrogen, and not introduced from without, that such a gas may form within the bladder is not generally credited by the best-informed members of the medical profession.

Having two cases bearing directly upon this question I think it proper to place them on record, the more so since I find that the subject has been already alluded to by several writers, notably Bouchut, and the malady by him considered a neurosis. The name pneumo-uria was given it by Raciborski.

The record of the following cases may serve to call attention to the subject and bring to light other instances in point.

CASE I.—In February, 1868, a gentleman of 67 applied to Dr. Van Buren for relief from frequency of urination with some urgency in the desire to accomplish the act, with night calls, etc., symptoms from which he had suffered for ten years, and which were plainly due to failure in expulsive energy on the part of the bladder and to a prostate one third larger than normal. His urine was acid, 1020, containing a small amount of pus. He could not entirely empty his bladder. There was no gas in the bladder at this date.

Under the use of a catheter improvement in urination was noted, but gradually with a steady increase in the size of the prostate it became impossible for the patient to retain his water, when the call to urinate came suddenly upon him, and he was forced to resort to the use of a urinal in travelling, and upon going out in the evening. Later it became impossible to pass any instrument into the bladder, and finally, in the summer of 1873, the patient died from kidney disease in the classical mode of death commonly attendant upon prolonged obstructive prostatic disease.

I never attended him directly until during his last days. Dr. Van Buren remembers that the patient passed gas occasionally from his penis, but I made no especial note of the fact and cannot remember the dates, although I do remember examining the urine for Dr. Van Buren for foreign matter and finding none.

After death the body was placed immediately upon ice, and in about twenty-four hours I made an autopsy, mainly to determine why instruments would not enter the bladder.

On opening the abdomen the bladder was seen fully distended, and evidently about half full of gas. There was no evidence of decomposition about the intestines. The outside of the bladder was not inflamed or adherent to any intestine. I inferred at once that the gas had entered the bladder from a fistula communicating with the bowel, and therefore cut into its dome, allowing all the gas to escape, that I might examine the perforation *in situ*. The bas-fond of the bladder contained urine not putrid—and, as I remember it, not specially ammoniacal—but I searched in vain for a perforation. No fecal matter was in the bladder. I searched among the small intestines and along the top of the bladder, but found no perforation. I removed the bladder, but obtained no clue to the possible source of the gas.

I therefore concluded that the gas was due to some form of decomposition of the urine and made no further investigation. The prostate was quite large and its canal distorted, thus explaining why no instrument had found its way into the bladder.

This case is suggestive only, not demonstrative. The gas was never examined. I had never heard of the existence of gas in the bladder at that date, except as a result of fistula into the intestine. I did not preserve the bladder. I took no written notes at the time of making the autopsy, and my memory as to the exact condition of the urine may be defective. I therefore present the case for what it may be worth. It puzzled me at the time. Whether it was a case of true pneumo-uria or not, I cannot say. It seems to me possible that it was.

CASE II.—X., aged 68, was referred to me by Dr. Schnetter, in September, 1868, his complaint being frequent urination by day and by night, and the passage of wind by the urethra. His frequency of urination had existed something more than a year. He had begun to pass air by the urethra only a few days before visiting me. His urine was alkaline, 1030, containing a little pus; but no starch granules, meat fibres, or other foreign matter. The fluid was murky and possessed of a faintly sweetish ammoniacal odor. A No. 18 (French scale) Mercier catheter entered the bladder without encountering any obstacle, and through it escaped two ounces of reasonably clear urine, followed by a small amount of gas, devoid of any odor. The prostate was slightly enlarged. The patient complained of much pain in the perineum and rectum.

Both testicles became swollen on different occasions later on, and he had considerable discomfort from suppurative eczematous outbreaks about the thighs and scrotum. He was treated symptomatically for these complications, and by sounds and attempts at vesical irrigation together with alkaline diluents, anodynes, and tonics. But he failed steadily in general health and became quite yellow and cachectic. The most minute microscopic examinations of the urinary sediment, carefully repeated at short intervals, were uniformly negative in their results, so far as finding any foreign body that might have come from the intestine was concerned.

In December I asked Dr. Weir to see the patient with me, and we examined him very carefully under ether, with the coöperation of Dr. Schnetter and of Dr. Ferdinand, of Harlem.

Rectal examination showed a prostate but little enlarged. Between the rectum and the bladder, particularly on the left side, there existed a distinct inflammatory thickening of the vesico-rectal septum ; it was smooth and regular, not at all nodular, and not suggestive of cancer. On the rectal side as far as the finger could reach, or the eye by the aid of a speculum, there was no ulceration, erosion, or fistula. The inflammatory thickening extended higher than the finger could reach.

A sound in the bladder felt through the vesico-rectal walls showed a moderate amount of thickening not nodular in character. Through a soft catheter the bladder was injected to its fullest capacity under pressure, but no fluid could be seen to trickle into the rectum with the speculum in position. No growth could be felt within the bladder by the searcher. No stone was present.

No chill followed this examination, but the amount of gas passed by the urethra became greatly increased ; the urine ammoniacal and putrid. Dr. Ferdinand examined the gas and found it to contain sulphuretted hydrogen. I examined the gas and found it to contain sulphuretted hydrogen ; the urine also contained considerable sulphuretted hydrogen in solution. No vegetable cells, or meat fibres, or other débris of food, could be found in the urine. Pus, altered epithelial cells, and blood constituted the deposit, with a few crystals of uric acid and of triple phosphate.

Under cod-liver oil and local and general measures, the patient's strength and health gradually improved, so that two months later, in February, 1882, the urine was clear and sparkling, 1020, acid, and contained only a few pus cells ; but the gas continued. I now drew off the urine and caught the gas for examination, finding it free from sulphuretted hydrogen. The urine was now not ammoniacal, and contained no suphuretted hydrogen.

This condition of affairs continued through the spring with a gradual gain in ordinary health and strength. In the month of March the bowels became deranged, and the patient passed great quantities of very offensive gas by the rectum. During this period the quantity of gas passed by the urethra greatly diminished, and what did escape was perfectly sweet. In April, the gas from the rectum nearly ceased, while that from the bladder greatly increased in quantity.

In April, the urine being quite clear, I passed a catheter in my office, and drew off under a water-bath into a test-tube 30 cc. of gas, more than an equal quantity escaping after the tube was full. I corked the tube tightly while it was still under water, and sent it immediately to Professor Welch, of Bellevue Hospital Medical College, for examination. He pronounced the gas to be simple air, and ventured in explanation that whatever other gas was within the tube had diffused itself through the cork, yet he had the tube within the hour after it had been filled and tightly corked, and his examination corresponded with mine, which was made on the spot.

In May the patient had reached his full normal weight, 149 pounds ; the urine continued clear and acid, with a very trifling amount of pus ; the gas persisted, but was perfectly sweet.

In July I sent the patient to Europe with letters to Sir Henry Thompson and to Felix Guion. Sir Henry examined him quite thoroughly, and reported to me a negative result. The patient had no gas in his bladder at the time of the examination. No tumor was found by rectal examination, or by the searcher; yet, as there had been occasional slight hæmaturia, and as there were some distorted epithelial cells with large nuclei in the urine, Sir Henry leaned to a diagnosis of cancer, and advised exploration by the finger through the perineum on the patient's return to New York. As to gas in the bladder, Sir Henry observed in his letter: "I have never seen any evidence to my mind warranting me to believe in the production of gas in the bladder, apart from its introduction by the intestine or from without. I by no means deny the possibility, and would be greatly interested in seeing such a case," etc. The patient was made so sore by the thorough examination of Thompson, that he feared to visit Guion; but went in Paris to see Mallez, who did not examine him physically, and gave no opinion except that gas in the bladder was not very uncommon. In France the patient improved daily during twenty-four days, eating and drinking whatever he liked. He passed no gas. No blood escaped his urethra after leaving London, and he returned to New York in the middle of October, passing acid, clear urine, with a light sediment of pus, still passing gas and urinating altogether too frequently; but having gained a number of pounds on his trip, feeling strong and reasonably well, and looking vastly better than at any time for the past eighteen months.

The gas in this case has never contained sulphuretted hydrogen when the urine was clear and acid. Dr. Schnetter ventured the opinion that a communication existed between the bladder and the small intestine, the gases of which intestine are usually air and carbonic acid; but the urine did not contain any excess of carbonates. The gas has not been examined for carbonic acid. It is difficult to obtain it, as the patient objects to the use of a catheter. Moreover, the cellulitis only seemed to involve the vesico-rectal septum. It is to be noted that when the intestines were full of gas, the bladder did not contain as much gas as usual.

There was never any evidence of an escape of urine into the intestinal passages, and certainly no débris of food could ever be detected in the urine. An opening, if one existed, must have been either the track of an abscess (due to the cellulitis) or a cancerous erosion. It could not have been the atter, since the patient's health hast improved immensely for six months. If it was the track of an abscess, it must have been very minute, since no urine ever passed through it into the bowel, and it should have closed when the cellulitis got well; Thompson discovered no evidences of cellulitis by the rectal touch.

That there is no intestinal fistula in this case I cannot assert, since the crucial test of an autopsy is lacking; yet the character of the gas and of the urine both tend to substantiate a belief that this may be one of those peculiar cases where a gas resembling air forms in the bladder from causes as yet not understood.

I have found in the literature of the subject two such cases sufficiently accurate in their description to make them acceptable, but unfortunately I have found no case verified by an autopsy, so that the sceptical are still justified in doubting. My own recorded autopsy fails to be conclusive only on the ground that no chemical examination was made of the urine to eliminate the possibility of the decomposition of that fluid as a factor in the gas formation. My memory of the condition of the urine, however, is quite clear. I am absolutely certain that the urine was not putrid.

But for the rarity of the occurrence of the phenomenon, it is not harder to believe that the walls of the bladder can secrete air than to believe the same of the walls of the stomach or intestine. It is not so extraordinary or inexplicable as the colpohyperplasia cystica * of Winkel (vaginitis emphysematosa), or any more strange than the formation of gas in the uterus, as vouched for by Bianchi, Astruc, Cullen, and referred to by A. Brierre de Boisemont in his interesting thesis, "Recherches sur les Pneumatoses, ou sécrétions gazeuses observées dans divers tissus de l'Economie animale."†

This thesis indeed makes the clearest mention of air in the bladder which I have been able to find, referring as it does, without detail, to a case reported by Wedel in the "Miscellanea curiosa," p. 85, and stating that Rives, when prosector to the Medical School at Paris, showed his students an infant whose only malady was the passage of gas by the penis ("qui n'avait pour toute maladie que cette émission de gaz"). He states further that the urine was in no way decomposed, but had all the characters of the urine of a healthy individual.

The most closely observed case of this malady which I have found is one reported by Raciborski, and given at length under the name pneumo-uria in Bouchut's treatise "Du Nervosisme."‡ I condense it as follows: M. O., 40, a nervous hypochondriacal individual, became alarmed at seeing bubbles of air escape from the meatus toward the end of the act of urination. Raciborski visited him, having the urinary specialist Mercier and the chemist Mialhe in consultation. The latter drew off through a catheter the odorless gas which the bladder contained, directing it under water into a receiver. He examined the gas and the urine, finding the latter normal in composition and the former to be nitrogen. From this he concluded that the gas was air, the oxygen having been absorbed by the urine. Except nervous symptoms, this patient had had no evidence of any malady of the bladder or of the neighboring organs.

On another occasion, to exclude all foreign sources of air, Mercier passed the catheter upon the patient while he was submerged in a full bath—this in the presence of Drs. Mailhe and Raciborski. Air was obtained as before.

Once, after a voyage of four days to Bordeaux, no gas was found in the bladder on passing the catheter—an analogy with the respite of twenty-four days which my patient experienced after his voyage from New York to Paris.

Raciborski's patient often had difficulty in voiding the urine, particularly in the morning, and sometimes had to make repeated efforts before he could empty the bladder. He had also pains in the renal regions, about the bladder, loins, groins, and thighs. A postscriptum to the case states that during two weeks no air had been found by the catheter, introduced on two occasions, and here the history ceases abruptly.

These few particulars are all the details I can offer concerning this strange malady, pneumo-uria. Its existence is not yet clearly proved, but Mallez seems to accept it, since he assured my patient, who saw him in Paris, that it was far from uncommon for gas to form in the bladder, and that he, the patient, should not be too much concerned about it. Closer observation

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* Archiv fur Gynäkologie, 1877, II., 406.

† Thése de Paris, No. 201, 1825, p. 15.

‡ Second ed., Paris, 1877, p. 245.

of cases of this sort is desirable, and an example of it, carefully studied through life, and verified by a reliable autopsy, would be of the utmost value in establishing the existence of the malady upon a sound basis.—*Medical News.*

OPHTHALMIC APHORISMS.

Dr. J. J. Chisolm, of Baltimore, gives the following valuable aphorisms in a report presented to the Maryland State Medical Society at its last session :

1. APHORISM.—*Do not blister.* In forty-nine applications out of fifty, as I find it used by physicians at large, it is an additional and useless torture to the eye disease from which the patient is already suffering.

2. APHORISM.—*Do not use nitrate of silver.* As constantly prescribed by general practitioners, it is not beneficial in one case out of one hundred, and therefore is a very painful infliction to the ninety-nine who would have been so very much better off without it.

3. APHORISM. — *Do not prescribe sugar of lead.* In every case zinc, tannin or alum is better, and then there is no fear of having insoluble deposits incorporating themselves with the exposed surface of corneal ulcers.

4. APHORISM. — *Always use weak solutions of the mineral and vegetable astringents* in the treatment of eye inflammations which attack the mucous surfaces, and restrict their application to conjunctival diseases exclusively. One grain of alum, sulphate or chloride of zinc, sulphate of copper or nitrate of silver, in an ounce of water, will, in the majority of cases of conjunctival disease, do much more good and give much less uneasiness than the very painful five and ten-grain solutions which are so often injuriously prescribed by physicians.

5. APHORISM.—*Solution of the sulphate of atropia,* from one to four grains to the ounce of rose water, is an essential eyedrop in the treatment of acute iritis, to break up newly formed adhesions. One drop of the atropia solution in an inflamed eye is a most valuable means of establishing the diagnosis whether iritic complications exist or not, and should be used in most cases of eye inflammation to find out whether there are any adhesions of the pupil to the lens.

6. APHORISM.—*Eserine in solution of one grain to the ounce of water* is the remedy for purely corneal lesions.

7. APHORISM. — When physicians are in doubt as to the character of an eye disease, they should seek a consultation from specialists who are more familiar with eye diseases than general practitioners can possible be. Such timely aid often saves the patient a lifetime of trouble.

If physicians would commit to memory and keep at their finger ends, and ready for use, these simple aphorisms, the amount of mental and bodily suffering which they will prevent in their eye patients is beyond calculation. While all good rules have exceptions, they may safely follow these for their simple guidance.

REMARKS ON A NEW MODE OF AFFORDING PERMANENT RELIEF TO INTRACTABLE CHRONIC CYSTITIS, AND TO CONFIRMED PROSTATIC RETENTION OF URINE. By SIR HENRY THOMPSON, F.R.C.S., Surgeon Extraordinary to His Majesty the King of the Belgians, Consulting Surgeon and Emeritus Professor of Clinical Surgery to University College Hospital, etc.

I have long been anxious to discover a means of affording some permanent relief to those who suffer with severe and long-standing prostatic disease. I refer to a condition in which the patient, having for several years relied entirely on the use of a catheter for the removal of all his urine, finds the bladder becoming so intolerant of its contents, that the act of catheterism, at first perhaps employed but three or four times in the twenty-four hours, must now be repeated under penalty of unendurable torture, at least every hour or hour and half. His time is indeed chiefly spent, both by day and by night, partly in suffering from retained urine, and partly from the painful catheterism for the sake of the temporary relief it affords.

It is more than fifteen years ago since I first attempted to mitigate this condition by tapping the bladder above the pubes and establishing an opening thereby by which to empty the bladder, and to supersede, for a considerable time at least, the otherwise inevitable frequent catheterism.

But the cases in which it appeared to be warrantable to adopt this somewhat grave remedy, were mostly examples of the disease in a very advanced stage ; and, for three or four such, the last few weeks of a doomed life were rendered by that proceeding comparatively comfortable.

In two others, the disagreeable leakage of urine which took place round the tube, greatly interfered with the patient's comfort, and with his ability to take exercise, etc. The plan seems therefore to be applicable only to the cases first referred to ; and it appeared that the power to afford substantial relief to patients who, were it not for the severe local suffering, possess healthy constitutions and some vigor, was still a desideratum.

The essential element of the difficulty in these cases is evidently the presence of a severe chronic cystitis, from which there is no escape ; since the continued mechanical interference, rendered necessary by retention, perpetuates and intensifies the cystitis. The patient is, in fact, the victim of a vicious circle of actions, in which an indispensable remedy, the catheter, aggravates the inflammation of the bladder, which therefore, in its turn, demands the instrument with increasing frequency.

It occurred to me, then, that were it possible to suspend all action on the part of the bladder for a few days only, to prevent any accumulation of urine with the organ, to allay the constant and painful want to pass urine, and also at the same time to abolish catheterism altogether, with its irritating effect on the urethra, the inflammation of the bladder might subside, and its tolerance of urine might considerably increase. And I hoped that a state of things might be subsequently brought about, similar to that which is present in a less aggravated stage of obstruction, when catheterism is not needed more than six or seven times in the twenty-four hours. If, in place of hourly relief by the instrument, an interval of three or four hours could be made to suffice, an enormous boon would be conferred on the patient.

This object, it seemed to me, might probably be attained by a proceeding of the following kind. First, placing the patient in the lithotomy position, under ether, I proposed to pass a grooved median staff into the bladder, and make, from the raphé of the perinæum, a small vertical incision just above the anus, large enough only to admit the index finger—the incision to terminate in the staff at the membranous portion of the urethra, which should be divided for half an inch at most, so as to admit the finger to traverse the canal to the neck of the bladder. Then having withdrawn the staff, I proposed to insert a large vulcanized catheter or tube, say about No. 20 (English scale), with its extremity just within the bladder, fastening it there by tape to a bandage round the waist ; the tube to be retained as a channel for the urine, for several days at least.

An opportunity soon offered of making an opening in the manner described, for a patient at the age of sixty, who was passing the catheter every hour, and whose vital powers were at the lowest ebb from constant suffering and loss of rest, but whose constitution was apparently sound ; and I placed in the bladder, by the new passage, an India-rubber catheter, so that the urine might flow off continuously into a receptacle as fast as it arrived in the bladder. The relief was immediate, and most remarkable. He enjoyed long periods of unbroken sleep, and was unconscious of any pain ; while the urine itself, which had been charged with muco-pus and blood, and had been alkaline and offensive in the highest degree, assumed in the course of a few hours a healthy color, an acid reaction, and was almost clear. In two or three days, the patient had regained appetite and digestion, became cheerful, and showed a change for the better, which no one had been sanguine enough to anticipate. On the eighth day, I removed the catheter from the wound ; during the next two days, urine issued by that route at intervals of some hours ; but the wound, which was very small, rapidly closed, and the catheter was, of course, again necessary. But the passing of the instrument was no longer painful ; the bladder was not inflamed, and could now retain urine three or four hours without inconvenience, while the patient himself, in less than three weeks from the operation, was enjoying an active life out of doors, having been long confined to his room in the suffering condition which has been described in general terms above. The operation was performed on the 20th of March last, in the presence of my friend, Dr. Chepmell, and others.

I saw my patient, a highly esteemed and well-known member of our own profession, on the 14th October last. The report, in his own words, was then as follows. "I use the catheter now only six times in the twenty-four hours, instead of eighteen or twenty times. The urine is a little cloudy—mostly acid, sometimes the reverse. I can drive for two or three hours in the afternoon without pain or fatigue, taking usually a morning walk of a mile or more. My general health is good. The degree of relief afforded by the operation can scarcely be exaggerated."

On the 30th of June last, I performed the same operation on a gentleman, eighty-three years of age, who was suffering from unusually painful and frequent micturition, the interval rarely amounting to three quarters of an hour either by day or night. He could, however, nearly empty his bladder by his own efforts, and required the catheter only once a day ; its employment affording very little relief. It was one of those rare examples of such a condition existing, in which no calculus and no organic changes in the urinary organs could be discovered. As his constitution was excellent, I did not hesitate (his age notwithstanding) to pursue the course described in the preceding case—failing to find, on examination, either tumor of any kind, or calculus. The immediate relief, however, was so great, that I did not remove the India-rubber tube from the wound until the twelfth day ; and he was then very unwilling to part with it, since he had not been so comfortable for upward of a year. He had also been able to dispense altogether with the use of morphia, which, up to the time of the operation, he had been compelled to take in full doses. The wound rapidly healed; he retained urine from two to three hours, using his catheter only once in the day as before. Such was the report he gave me in the early antumn, as I left town. During my absence, he ventured to take much more exercise than he had been of late accustomed to, and had a relapse. When I saw him on my return (October 7th), he was gradually improving, and was very grateful for the change; saying he would gladly again submit to the operation, if anything like the old painful condition reappeared, as he had experienced nothing but relief from the proceeding. However, such a course does not at present appear to be necessary or imminent.

Such are two typical cases widely differing; the former an example of a comparatively common condition, the latter one of very rare occurrence. In both instances, I attribute the benefit to a temporary suspension of function in both the bladder and the urethra; in the bladder as a containing viscus, in the urethra as a channel or transmitting one. By means of the tube the urine leaves the body almost direct from the ureters, while the bladder and the urethra, being in a state of perfect quiescence, cease almost immediately to be inflamed; all muco-pus disappears, and the urine is discharged in as healthy condition as it leaves the kidneys—that is, free from any adventitious product of the passages. Another illustration of the extremely rapid recovery which the bladder is capable of making, even when it has been inflamed for a long period of time, which I have often had to note after removing a stone from its interior. Within six hours after emptying the bladder of broken calculous matter I have seen the urine, which had been for weeks charged with inflammatory products, flowing off absolutely clear. I cannot doubt, therefore, that this great recuperative power may be rendered available for the relief of obstinate cystitis produced by other causes than the presence of stone. By means of this simple incision, also, an opportunity is obtained of making "digital exploration of the bladder," on the plan which I recently proposed as a systematic procedure for the diagnosis and treatment of obscure cases. While the patient is fully under the influence of ether the operator is to make, with his right hand, firm suprapubic pressure, by which means he is able to bring every portion of the inner surface of the bladder consecutively over the tip of the left index finger, introduced by the opening to the neck of the bladder, and thus to ascertain its condition and contents. I fancy that calculous deposit, or impacted calculus, is thus detected. Its removal may be accomplished, supposing it to be movable, as it mostly is. I have now performed the operation described in ten cases for various purposes, and in two of these I have been able to remove adhering and impacted calculus where its presence was little suspected, in one instance, with a remarkably successful result. Both these cases I had the advantage of seeing in consultation with Sir William Jenner before deciding on the operation.

I am aware that proposals have long ago been made to "perform lithotomy" for cases of intractable chronic cystitis associated with enlarged prostate, no doubt partly on the ground that division of the prostate itself might be serviceable. This, however, is a measure of far greater risk than the operation I have employed, which is simply a very limited external urethrotomy, leaving both bladder and prostate free from any action of the knife. But I am satisfied that no benefit follows even the incision and dilatation which necessarily take place in the operation of lithotomy in prostatic cases, as far as restoration of the power of the bladder is concerned. I have performed the lateral operation for several patients who had been long previousiy unable to pass any urine except by catheter, and in operating I have sometimes removed considerable masses of tumor, and have always been disappointed subsequently at finding no improvement whatever in regard of the patient's power to micturate without artificial aid. The performance of lithotomy, then, ought not to be contemplated in any case with the object in view now under consideration. The withdrawal of the urine, however, by an opening into the membranous part of the urethra is a very safe and simple proceeding, and will, I am satisfied, afford more or less relief for a considerable period of time to patients whose sufferings are due to the action of very frequent catheterism upon passages which have long been severely inflamed. — *British Medical Journal,* Dec. 1882.

A STUDY OF THE PATHOLOGY AND TREATMENT OF ULCERS. By JOHN B. ROBERTS, M.D., Lecturer on Anatomy and on Operative Surgery in the Philadelphia School of Anatomy, Author of the "Compend of Anatomy."

When inflammation does not terminate in a return to health by resolution, death of the part by either ulceration or gangrene must take place. Ulceration is death in small particles, or molecules; gangrene is death in masses large enough to be seen. Similar processes in osseous tissue are called caries and necrosis. The causes of ulceration are the same as the causes of inflammation, to which ulceration always owes its existence. It may occur superficially, as in the skin and cornea; or deeply, as in the substance of organs, for sinuses and abscesses are nothing but the products of ulceration. The ulcerative process is more common in skin, mucous membrane, cartilages, lymphatic glands, lungs, and bone (called caries) than in fibrous, serous, or muscular tissue.

Ulceration consists in softening and disintegration of structure, followed by removal of the débris by absorption and ejection. When removal of tissue is effected by absorption alone, as is seen in erosion of tissue from aneurismal pressure, the term interstitial absorption is applicable, since ulceration causes removal chiefly by discharges. Ulceration and suppuration are closely allied, since some of the pus owes its existence to the destruction and disintegration of tissue. Sloughs and foreign bodies impacted in the tissues are usually thrown off by ulceration and suppuration occurring around them. Ulceration, then, is the molecular death of soft tissues, and produces on a free surface the anatomical lesion called an ulcer or open sore.

An ulcer is a breach of continuity of surface, covered by granulations accompanied by a discharge of pus. The nature of the granulations and of the pus determines the character of the ulcer. The solution of continuity may be due to the process of ulceration, to gangrene, or to a wound; for in gangrene the slough is separated by ulceration, and wounds that do not heal by first intention become ulcers as soon as granulation is instituted. A solution of continuity, called an ulcer, is usually deeper than the epithelium ; if not, the terms abrasion, desquamation, or excoriation are commonly applied. Among exceptions to this rule may be mentioned superficial ulcers of the cornea. Surgeons are called upon to treat ulcers of the skin and mucous membrane, and to these alone are the following paragraphs meant to apply. All ulcers are direct consequences of the inflammatory process, which is due to either constitutional or local causes. The causation is an important factor in the treatment of ulcers, but does not require any change in the classification which I intend to make.

All ulcers belong to one of two classes, viz., healthy or unhealthy. The healthy ulcer is typically illustrated by the sore produced when granulation has begun in a wound made by cutting out a portion of tissue. The edges are regular and smooth, and slope gradually toward the granulations, which are red, painless, do not bleed under gentle pressure, secrete healthy pus, and never protrude above the surface of the skin. The granulations at the circumference are being converted into a bluish-white cicatricial pellicle, while the skin surrounding the ulcer is pinkish and somewhat hardened by inflammatory infiltration. All ulcers must be brought to this condition before cicatrization can occur ; and as long as the ulcer continues healthy, healing goes on spontaneously and steadily if the surface be only protected from injurious contact. Protection is best effected by applying a piece of soft muslin or lint smeared with any bland oleaginous preparation. I prefer either oxide of zinc ointment, alone or combined with a few grains of carbolic acid, or the non-oxidizable ointments prepared from petroleum.

Unhealthy ulcers are those accompanied by some condition which prevents their exhibiting the characteristics above mentioned.

If undue inflammation be present, as shown by great heat and pain, œdematous surroundings, engorged granulations, and discharge of pus mixed with blood, it is an inflamed ulcer.

If this process be violent, and rapid destruction of tissue and extension of ulceration occur, a pultaceous mass is seen covering unhealthy looking granulations, and the edges become irregular and sharp-cut. This constitutes the so-called "sloughing" ulcer, which is a rather contradictory term.

When the granulations are exuberant and project like excrescences above the level of the skin, the ulcer is called a fungous ulcer.

The callous or indolent ulcer is deeply excavated, has indurated, whitish, and undermined or inverted borders, is surrounded by thickened and congested skin of a bluish color, shows imperfectly formed pale granulations covered with a foul-smelling thin pus, and is usually insensible to painful contact. Such ulcers are of long duration, and may well be termed chronic.

Ulcers may be complicated by, or may depend upon, the existence of varicose veins, impeded lymphatics, or diseased bone ; or may be the seat of hemorrhage or of malignant processes. Other circumstances may contribute to the production of complicated or unhealthy ulcers, but it is not necessary to give a distincive name to each one. The criterion of all ulcers is the condition of the edges. If the borders are pinkish and smooth, and gradually slope down to florid granulations, or perhaps are separated from them by a narrow line of bluish-white cicatricial tissue, it is certain that the ulcer is in a healthy state and only requires protection from irritation. Hence it may be dressed with any bland, non-irritant application. Ointment of oxide of zinc is, in my opinion, one of the best. Cicatrization usually takes place from the edges toward the centre, and, therefore, in large ulcers, even when healthy, the action of the cutaneous cells at the margins may be insufficient to complete the process, or, if able to do so, may be very slow in causing healing of the entire ulcerated surface.

Centres of cicatrization may be established upon the ulcer at any number of points by applying grafts of skin. Skin grafting is best performed by thrusting the point of an ordinary sewing needle under the epidermis of the inner surface of the arm or thigh, and, after putting the skin on the stretch by raising the needle, cutting out a minute portion of the true skin with a sharp scalpel. The graft, taken in this almost painless and bloodless manner, is then to be gently pressed upon the healthy granulations with its epidermic surface upward. Any number may be applied; after which the ulcer should be left uncovered for one or two hours until the grafts become attached by desiccation of the covering of lymph. Ointment of the oxide of zinc may then be used as a dressing, which should not be removed for two or three days.

The grafts at first shed their cuticle and become almost invisible, but in a few days bluish-white spots of cicatricial tissue are seen at the points where any of the grafts have taken root. These islands grow eccentrically by cell proliferation, and stimulate the periphery of the ulcer to similar activity, so that the cicatrizing process is greatly expedited by the new points of cutification, which gradually coalesce with one another and with the marginal skin. The process is not attended with much success unless the ulcer be healthy.

Plastic operations may be performed to hasten the healing of intractable ulcers by the transfer of healthy integument to their surfaces. The treatment of all unhealthy ulcers must be directed to transforming them into healthy ulcers, and must be constitutional as well as local.

If they depend on syphilis, specific remedies, such as mercury, iodoform, and the iodides must be given internally; if the strumous diathesis exist, iodine and its derivatives, cod-liver oil, and tonics are required. In all cases, digestive, and other constitutional vices must be investigated and treated. Any local exciting cause, such as bone disease, varicose veins, must be removed, or at least palliated; after which local treatment is to be regulated by the condition of the ulcer. An ulcer accompanied by severe and acute inflammation, must be managed on the well-known principles employed in the treatment of inflammation. In such cases antiphlogistic internal remedies are demanded, while elevation and rest of the part, lead-water and laudanum, warm-water dressings, or weak astringent solutions are used locally. When the inflammation is severe enough to cause sloughing or phagedenic destruction, supportive treatment and poultices, or other mild applications, are demanded. The local irritability and pain which characterizes many ulcers is often greatly lessened by the application of solid nitrate of silver, or strong solutions of the same (gr. xx–xl. to f℥j). Subnitrate of bismuth is an excellent local remedy. Fungous ulceration is treated by caustics, such as undiluted chromic acid, or by the surgeon cutting away the exuberant growth with the knife.

Ulcers exhibiting pale, œdematous, semi-transparent granulations require stimulating applications of nitrate of silver and sulphate of copper. Callous or indolent, ulcers are the most rebellious to treatment. The hard elevated edges must be softened and depressed, and the accompanying venous congestion, shown by the livid skin surrounding the sore, removed. My own plan is to apply pure carbolic or nitric acid to the insensitive edges, and to the foul and semidevitalized tissue covering the depressed and unhealthy granulations. Then a poultice is applied for a few days to separate the slough thus produced, and to soften the callous borders. Subsequently, scarification around and through the ulcer relieves the engorged venous capillaries; and the pressure of strips of adhesive plaster, carefully adjusted, or of an elastic bandage, smoothly applied from the distal extremity upward, prevents a repetition of the congestion, and stimulates absorption of deposits and cicatrization of the ulcer. Instead of using the caustic, I frequently get rid of the callous margins by paring them away, and then treat with poultices and pressure. Astringent and disinfecting lotions may be used beneath the elastic bandage. Chronic ulcers of small size may frequently be cured with rapidity by dissecting them out, freeing the surrounding skin from its deeper attachments, and uniting the edges of the wound by sutures.

As soon as unhealthy ulcers approach the healthy condition, cicatrization begins, which may be hastened by skin grafting. In order to maintain a healthy state of the sore and prevent œdematous and fungous granulations, slightly stimulant dressings of chloral (gr. v or x to f℥j), sulphate of copper (gr. v to f℥j), sulphate of zinc (gr. v to f℥j), nitrate of mercury, or subnitrate of bismuth in ointment, or powder, should be employed.

When in a few days or weeks the ulcer gets accustomed to the effect of one agent and becomes "inactive," the dressing must be varied, for a new impression will be beneficial. Mucous ulcers are to be treated like cutaneous sores.—*Ex.*

1118 Arch Street, Philadelphia.

One Thousand Consecutive Cases of Ovariotomy performed without any of the Listerian Details. By Mr. Lawson Tait.

This was the title of a paper read by Mr. Tait before the last meeting of the British Medical Association. There were only three deaths, one by accidental suffocation, it ought not therefore to be reckoned in the mortality of the operation. Six of the patients were pregnant at the time of operation.

In one of these there was acute peritonitis at the time of the operation. All of these six pregnant patients recovered and had their children afterward with one exception; she miscarried on the second day after operation and then made an easy recovery; four in all of the patients suffered from acute peritonitis at the time of operation. In two cases the disease was solid fibroma of the left ovary, in the other ninety-eight the disease was cystoma; of these the disease was in eleven cases parovarian, the ovaries and fallopian tubes were left intact, so that the operation was not ovariotomy at all.

Mr. Tait has, however, included them, as Mr. Spencer Wells has done, and as everybody must do, who wishes to contrast with him. The proportion here given bears out Mr. Tait's previous estimate that parovarian cysts constitute about 10 per cent of such operations. The presence of adhesions did not add in any way to the mortality. The operator attributes his remarkable success in this series of cases chiefly to the abandonment of the clamp (Mr. Spencer Wells's) treatment of the pedicle; the adoption of Keith's and Kœberle's method of cleansing the peritoneum. Increased personal experience diminished proportion of cases that had been frequently tapped; complete abandonment of the use of carbolic acid, or any other so-called antiseptic system, in the performance of the operation, and in the subsequent treatment; the establishment of hospital discipline and hygiene, on the best known principles, for private as well as for public patients. Mr. Tait appends a table, giving the date of operation, the age, and residence of each patient, and the name of her ordinary medical attendant apparently with the object of preventing the making of unfair and unwarranted statements behind his back, statements no one was bold enough to make in public. Mr. Tait stated that in the instance of one well-known surgeon he had to resort to the extreme measure of a threat of legal proceedings, and that he certainly would carry the threat into execution if this kind of criticism were continued. —*Brit. Med. Journal*, Oct. 28, 1882.

CASE OF CONGENITAL ABSENCE OF UTERUS AND VAGINA. By WM. M. REID, M.D.

A woman presented herself lately at the Western Infirmary complaining of amenorrhea and dyspareunia. Is 24 years of age, rather pale, but in good bodily condition. As a child she enjoyed good health. When about 18 she noticed a stain of blood on her chemise after carrying a heavy basket, and again, six months subsequently, after a long walk. This was followed by a "severe illness," lasting for three or four days, during which she had great pain in the abdomen, and spasms compelled her to "hold by the bed." Some months afterward a similar attack was followed by swelling of legs and feet, which did not pass off for some time. For a year thereafter, every month, and for a few hours at a time, she had a discharge of blood by the mouth. A slight feeling of burning at the epigastrium was experienced, and then the blood came up with a "soft cough." Rather more than a year ago she was married. For some weeks attempts at intercourse gave her very great pain, and were followed by more or less bleeding. By and by the pain became less acute, but her husband complained of something being wrong, and still insists that she is not like other women. The mammæ are well-developed and the nipples large. The voice and features are feminine in character. Micturition and defecation are normal. There is a quantity of hair on the mons veneris, and the vulva is normal in appearance. When I attempted to pass my finger into the vagina it was obstruced as if by a firm thick hymen, but passing the point forward it passed freely, but apparently through a narrow part of the vagina such as I have seen in incomplete atresia vaginæ. When this was overcome, a cavity was found in which the finger could move freely, but no os uteri or vaginal roof was felt. On withdrawing the finger a constrictor muscle was felt acting, and suggested the idea that I had penetrated into the bladder instead of into the vagina. On ocular inspection this was found to have been the case. Between the labia minora, with the urethra in front and anus behind, a dimple existed, that was very visible, the surface being covered by unbroken mucous membrane. This was about half an inch in depth, and could be pressed inward by the finger for about an inch farther, but only by putting the parts on the stretch. On passing a sound into the bladder and a finger into the rectum it was found that only a very thin layer of tissue intervened, the point of the instrument being felt as if it were in the vagina. At a subsequent examination a few days later, a finger introduced into the bladder and opposed to another passed high up in the rectum, did not detect the slightest trace of any solid body resembling the uterus or ovaries. Careful bimanual examination between the abdomen and rectum and abdomen and bladder failed in detecting anything which could be considered ovary or a rudimentary uterus. The septum in the body of the woman running up only as far as it could be traced by recto-vesical examination, the pouch of peritoneum filled with small intestine is supposed to begin at that point, but it may have been higher.

The following points in this case are of interest. There is no reasonable doubt that the urethra takes up the function of the vagina during coitus. The patient voluntarily mentioned the fact that after connection she passed "white stuff" in her urine, probably without knowing its import. Oldham mentions cases where, when the vagina was absent, the urethra was congenitally large, and Barnes thinks that Oldham was right in his conjecture. In the present case, however, there is the distinct history of bleeding at first, and severe pain for a length of time, apparently till the urethra became very much dilated. She still complains of pain during intercourse, but certainly the forefinger can be passed freely into the bladder without giving rise even to discomfort. In many cases where coitus took place by the urethra, incontinence of urine was found to result. In this case the patient has perfect command of the bladder, the sphincter being felt contracting on the retreating finger.

Although neither uterus nor ovaries could be detected, there is present both sexual desire and gratification. Sir James Simpson recorded a case where there was sexual desire, but he adds nothing further. The fact that there was present for about a year a discharge of blood, the regularity of which, in a healthy woman, can be easily explained only on the supposition that it was vicarious menstruation, would point strongly to the conclusion that there must be some ovarian tissue, although not so much as to have kept up the discharge or to be readily detected by bimanual examination. It is somewhat difficult to say to what the two attacks of spasmodic pain were due. The apparently vicarious discharge happened very soon after the second seizure. Were they due to ovarian excitement not finding natural vent, or only to accidental attacks of colic? From nothing in this patient's manner, speech, or external appearance, could one have for a moment suspected that her sexual organs were other than normal; and on the whole she might be described as a fairly strong, good-looking woman.—*Glasgow Med. Jour.*, Oct.

COTTON SEED OIL. SOME OF ITS USES IN PHARMACY, AND ITS DETECTION WHEN MIXED WITH OLIVE OIL. By S. S. BRADFORD, Ph.D.

Having had occasion during the last six years to manufacture lead plaster in considerable quantities, it occurred to me that cotton seed oil might be used instead of olive oil, at less expense, and with as good results. The making of this plaster with cotton seed oil has been questioned, as according to some authorities the product is not of good consistence, and is apt to be soft, sticky, and dark colored, but in my experience such is not the case. If the U.S.P. process is followed in making this plaster, substituting for the olive oil cotton seed oil, and instead of one half pint of boiling water one and one half pint are added, the product obtained will be equally as good as that from olive oil. My results with this oil in making lead plaster led me to try it in making the different liniments of the Pharmacopœia, with the following results :

Linimentum Ammoniæ.—This liniment, made with cotton seed oil, is of much better consistency than when made with olive oil. It is not so thick, will pour easily out of the bottle, and if the ammonia used is of proper strength will make a perfect liniment.

Linimentum Calcis.—Cotton seed oil is not at all adapted to making this liniment. It does not readily saponify, separates quickly, and it is almost impossible to unite when separated.

Linimentum Camphoræ. — Cotton seed oil is far superior to olive oil in making this liniment, it being a much better solvent of camphor. It has not that disagreeable odor so commonly found in the liniment.

Linimentum Chloroformi. — Cotton seed oil being very soluble in chloroform, the liniment made with it leaves nothing to be desired.

Linimentum Plumbi Subacetatis.—When liq. plum bisubacet. is mixed with cotton seed oil and allowed to stand for some time the oil assumes a reddish color similar to that of freshly-made tincture of myrrh. When the liquor is mixed with olive oil, if the oil be pure no such change takes place. Noticing this change, it occurred to me that this would be a simple and easy way to detect cotton seed oil when mixed with olive oil. This change usually takes place after standing from twelve to twenty-four hours. It is easily detected in mixtures containing five per cent or even less of the oil, and I am convinced, after making numerous experiments with different oils, that it is peculiar to cotton seed oil.—*Journal Pharmacy.*

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PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

STATED MEETING, NOVEMBER 8, 1882. R. E. VAN GIESON, M.D., PRESIDENT PRO TEM.

Dr. W. M. Carpenter presented, in behalf of a candidate, a specimen of

DERMOID CYST OF THE OVARY.

Dr. Willard Parker, Jr., presented, in behalf of a candidate, a specimen of

FIBRO-SARCOMA OF THE BREAST.

Dr. J. H. Ripley presented portions of membrane removed from the trachea, accompanied by the following history :

PRIMARY CROUP — TRACHEOTOMY — DIPHTHERITIC CROUP.

" Richard Mc——, six years of age, had had a cough for two weeks, which was only troublesome at night, otherwise he was in fair health. No dyspnœa had been observed by his grandmother, who had him in care, until the morning of October 16th. In the evening of that same day Dr. Leipziger was called to see him, and found the dyspnœa very distressing. He sent for his neighbor, Dr. Cushman, and both decided that the patient's only chance was in having tracheotomy done. I was asked to do the operation, and saw the child at once. The dyspnœa was then extreme, the face and extremities cold and clammy, and the intellect clouded. The pulse was full and slow, the respiration frequent, the temperature subnormal. There was no swelling of the neck or tonsils, no nasal discharge, and no membrane to be seen either in the nose or throat. Chloroform was sparingly given, and the trachea opened without delay, Drs. Leipziger and Cushman assisting. Much purulent matter escaped from the wound, but no distinct shreds of membrane. Soon after the operation the temperature became normal, the respiration easy, and the evidences of imperfect oxygenation disappeared.

"October 17th, 10 A.M.—Breathing easy, and child looking well. Still no membrane to be seen and no swelling of neck or glands. 6 P.M.: Has coughed up several pieces of membrane and a piece is now heard flapping in the trachea. There is a profuse discharge of muco-purulent matter from the right nostril, and the left tonsil is red and swollen, and partly covered with a milk-white membrane.

"October 18th, 10 A.M.—Neck is much swollen, face congested and perspiring, respiration somewhat embarrassed, nose still discharging, wound covered with membrane; several pieces of membrane are removed from the trachea, but breathing is not relieved. 6 P.M.: Boy has passed only four ounces of urine to-day, and it is albuminous, and contains both red and white blood-corpuscles.

"October 19th.—Morphine enabled the patient to pass a comparatively comfortable night. His general condition this morning is very unfavorable. The neck is enormously swollen, two large serous blebs have formed near the edges of the wound, and both tonsils are covered with membrane; respiration and pulse have increased in frequency, and the temperature has fallen from 103° to 101° F. The urine remains scanty, and the proportion of albumen has increased. The child is rapidly failing. 6 P.M.: Died at 5 P.M. of asthenia.

"Steam lime water spray, pilocarpin, and other remedies were faithfully tried by Dr. Leipziger, who had charge of the case."

The points of special interest in the case were the following: The child at first presented all the rational symptoms of so-called membranous croup, but there was no glandular swelling, nor could membrane be seen, and yet the child was evidently dying of laryngeal stenosis. After the operation all the symptoms of constitutional poisoning developed, and were so marked there could be no doubt that it was a case of diphtheritic croup. He believed that contagion would not have necessarily followed exposure to the case when he first saw the child. Granting that there was such a thing as pseudo-membranous croup, he believed that the early symptoms, in such cases, gave no clew as to what was to follow, and no man could predict what would be the condition of the case on the next day. Hence it was necessary to remove at once all children from exposure without reference to the apparent mildness of the attack.

Dr. Van Gieson confirmed the remarks made by Dr. Ripley, by referring to cases which recently came under his observation. The attending physician, an eminent practitioner, had told the parents that there was no danger, and that the other children need not be removed. Two children died, and the third barely escaped. He believed it was eminently safe to remove the other children in a family, no matter how mild might be the attack of the first child, and also without reference to what our belief might be.

PECULIAR EXOSTOSIS OF THE FEMUR.

Dr. J. A. Wyeth presented the left femur which had been fractured. It exhibited an exostosis at its upper portion, an inch and a half long, about one fourth of an inch in diameter, and projecting *downward.*

RECOVERY FROM A GUN-SHOT WOUND OF THE KNEE.

Dr. Wyeth also presented a specimen removed from the body of a man who received a gun-shot wound of the knee-joint, and recovered with motion. There was a wound of entrance and exit, and the missile, either a Minié or a Belgian ball, passed beneath the patella and clipped off a piece of bone from the surface of each condyle. The surface of the internal condyle had been entirely obliterated. Recovery had been so complete that what remained of the track of the bullet was non-articular. There was no anchylosis.

Dr. G. L. Peabody presented a specimen of

HÆMORRHAGE INTO THE PONS VAROLII.

A. C——, aged fifty-seven, of Ireland, widow, servant, was admitted to the New York Hospital April 14th, 1882. She was brought into the hospital in a moribund condition, artificial respiration having been necessary in the ambulance. An incomplete previous history was obtained from her friends. She had had a number of severe pulmonary hæmorrhages within four years past. This morning she started to go to her work, complaining of headache and dizziness, and very suddenly she became unconscious. A physician was summoned, who found her suffering from œdema of the lungs, and gave her brandy hypodermically.

On admission she was emaciated and anæmic. There was no œdema. The muscular tissue was very flabby, and she presented an appearance of senility. Her skin was warm and dry; her pupils dilated and immobile. She was completely comatose; reflexes were all absent, and she did not respire. Both heart-sounds were audible, and the radial pulse could still be felt. A faradic current was applied to the phrenic nerves, and brandy, ether, and digitalin were administered hypodermically. Presently she gasped twice, and the respiration again ceased. Artificial respiration was resorted to and continued for nearly half an hour, but without avail. The radial pulse soon disappeared, and the heart ceased to beat.

At the autopsy it was noticed that the convolutions of the brain were generally somewhat flattened. The third ventricle contained a small clot of blood, and the fourth ventricle was completely distended by blood. The tissue of the pons was almost entirely disintegrated by hæmorrhage.

The heart contained an enormous amount of fat, in many regions the transverse striæ having been rendered quite invisible. The left ventricle was somewhat hypertrophied.

The kidneys showed the common lesions of advanced diffuse nephritis.

Dr. Peabody also presented specimens illustrating

PIGMENT IN THE BLOOD-VESSELS OF THE BRAIN, SPINAL CORD, LIVER, AND SPLEEN.

E. H——, forty-nine years of age, United States, widower, mariner, was admitted to the New York Hospital on November 6th, 1882. He was quite conscious, though greatly depressed. He was suffering from a chill, his temperature being 100° F.; pulse was 120, full and bounding; breathing was good. He soon began to suffer from general convulsions; later the convulsions were confined to the upper extremities. His temperature became quite irregular soon after admission, rising to 102° F., and then again falling to normal.

It was impossible to obtain urine, at first, for examination, because his penis exhibited the condition of hypospadias, and the meatus was too small to admit a catheter. He passed it involuntarily, in apparent abundance. About a dram was finally obtained for examination, and found to contain albumen and granular casts. He was given croton oil, and put into a hot-air bath. The oil did not operate, but he was soon in a profuse sweat. Subsequently the administration of more croton oil was followed by free purging. Soon after this he roused himself sufficiently to talk about his condition. In the evening convulsions suddenly returned with increased intensity, respirations were accelerated and noisy; pulse became 130 to 140, and his temperature (which had been normal at 6.40 P.M.) began to rise rapidly.

At 1.30 A.M. on the following morning his temperature was 104° F., and he was completely unconscious. The hot-air bath was again resorted to with the effect of producing morbid sweating, but without causing the temperature to fall. At 2 A.M. it was 105.4° F., his pulse became weaker, œdema of the lungs developed, and soon thereafter, despite cupping and stimulation, he died.

The autopsy was held on the afternoon of the same day. The chief lesions of interest were in the gray matter of the brain, in the spleen, and in the liver. The gray matter of the brain was much darker gray than usual, while the liver and spleen were of a very dark brown hue. The changes in color were due to the presence of a large amount of granular pigment within the blood vessels of these organs. He had found that in the brain the pigment was not confined to the vessels of the gray matter, but also existed in those of the white matter. In the liver it was chiefly in the vessels, not altogether, and was also in the connective tissues. He had also found it in the white blood-cells.

Dr. Peabody exhibited hardened sections of brain and kidney taken by him some years ago from a similar case. They exhibited the vessels, even the small ones, of the brain almost as distinctly marked out as if they had been injected; in the kidney the vessels of the Malpighian tufts, being the first of the two sets of capillaries through which the blood has to pass, contained large quantities of pigment.

The case was instructive regarding the diagnosis of similar ones, and suggested the propriety of examining the blood in all such conditions. He believed that if the examinations were carefully conducted, pigment would always be found *during* a paroxysm of the disease.

As to the etiology of the disease, he could only say, in view of the defective history, that the man had been a sailor, and suggested that he had probably been in the tropics, where malignant forms of ague were not infrequently contracted.

PIGMENTATION OF PIA MATER OF THE CORD.

Dr. Peabody further presented a specimen that illustrated the above condition. He had seen this condition several times, both about the cord and at the base of the brain, and in none of the cases was he able to trace any symptoms to it. The pigment in cases of this kind was not free in the lumen of the vessels, but was deposited in the fixed cells of the membranes, and was permanent, having quite a different etiology and significance from that in the organ first exhibited.

Dr. B. Robinson asked Dr. Peabody if he wished to affirm that that pigment could be found invariably in the blood in malarial fevers.

Dr. Peabody replied that he did not wish to be understood as making that assertion, but he thought it could be found in all cases of pernicious fever if the blood was examined during the paroxysm, and taken from parts of the body where the circulation is not very active. If the blood was examined in the common way by removing a portion from the end of a finger, probably pigment would not be found uniformly; but, if the blood was taken from the back, pigment would probably be found in all cases in abundance. He did not, however, believe that pigment would be uniformly found in the blood in ordinary attacks of intermittent fever.

Dr. Robinson remarked that in a number of cases of intermittent fever he had examined the blood soon after the occurrence of the paroxysm, and had failed to detect pigment.

ANEURISM OF THE AORTA.

Dr. B. Robinson presented a specimen with the following history: It was removed from the body of a man, aged thirty-two, single, a native of the United States, and by occupation a saddler, who entered St. Luke's Hospital one week ago. He had always been healthy until two months ago, when he took a severe cold which was attended by a severe cough and the usual symptoms of acute bronchitis. The difficulty of breathing seemed to be no greater than could be accounted for by the bronchitis, but a few days afterward it increased and persisted until he entered the hospital. At times the dyspnœa was accompanied by severe paroxysmal attacks of coughing. On admission there was considerable dyspnœa, both inspiration and expiration being prolonged and noisy. Examination of the chest revealed no cardiac symptoms. There were were no râles, but there was hyper-resonance on percussion and the physical signs of vesicular emphysema. The difficulty of breathing continued. Laryngeal examination did not reveal anything abnormal.

There was not much hoarseness; certainly no aphonia. There was no history of specific disease or strain. The stridor was marked in both inspiration and expiration; but there was no cyanosis nor œdema of the extremities. The diagnosis was acute vesicular emphysema, generalized, possibly developed by the acute bronchitis in an individual who had not presented any other signs of disease. The man became comatose and died.

At the autopsy there were found general emphysema of the lungs, and in the lower portion of the lower lobe of the left lung a possible condition of consolidation. The right ventricle contained a fibrinous clot. The larynx was normal. An aneurism of the arch of the aorta, about the size of a pullet's egg, was found, most prominent upon the left side and extending in front of the trachea, and it had evidently produced a certain amount of stenosis.

As bearing upon the theory that the fine chest râles are produced in pleural plastic exudation, it was remarkable that such râles were heard distinctly upon both sides under the clavicles, but upon one side only did there exist any plastic exudation.

Dr. Ripley remarked, concerning the general emphysematous condition of the lungs, that, some time ago, he presented a specimen of aneurism of the arch of the aorta, which pressed upon the trachea and one bronchus, and directed attention to the fact that the lung which did not receive the usual quantity of air was in a state of emphysema. He had also proved that those children who died with bronchial and laryngeal obstruction did not have pneumonia but emphysema. Dr. Robinson's case sustained his theory. Every case in which he had made an autopsy after death from croup had showed the lungs to be in the same condition, and to this he had also directed attention in connection with that subject.

Dr. J. Lewis Smith thought that in nearly all cases of recent catarrhal pneumonia in children the lungs could be inflated, and the same was true with reference to atelectasis; but that the two conditions could be differentiated by the semi-solid feel of the lungs in pneumonia.

Dr. Ripley believed it was impossible to inflate those lobules which were the seat of catarrhal pneumonia, unless they were only partially filled with inflammatory products.

TUMOR (LIPOMA) OF THE AXILLA IN AN INFANT FOUR MONTHS OLD.

Dr. Briddon presented a specimen with the following history: The patient from whom it was removed was brought to his office by its parents in company with their attending physician, Dr. Stephen I. Clark, on November 3d, 1882. The parents were healthy-looking people, and were not aware of any such disease as that which afflicted the child having occurred in any member of the family on either side. The mother first noticed a swelling two months ago, about the size of her thumb; it was situated one inch to the outside of, and a little above the level of the left nipple; it had steadily increased in size, and twenty-four hours before Dr. Briddon's examination it was explored by Dr. Clark with a hypodermic syringe, with negative results.

The child was four months old, large for its age, laughing, lively, bright and healthy in appearance; certainly bearing no evidence of systemic contamination. The left axilla was filled with a tumor fully as large as the closed fist of an adult. It bulged in front and below, passing upward into the apex of the space. It was ovoid in form, and its long axis was directed obliquely from the neighborhood of the anterior border of the scapula to the middle of the clavicle. The skin was free and did not dimple on lateral pressure of the tumor. It was slightly mottled, reddish, with a few superficial veins meandering over the surface. It yielded the deceptive sense of fluctuation, that was common to some malignant growths, and such was his opinion of its nature, but to satisfy Dr. Clark he explored it with an aspirating needle, with no different results than those obtained by the doctor himself.

Dr. Briddon recommended an operation, and gave a guarded prognosis as to the probable recurrence of the disease. In view of the dangers of such an operation in so young a child advised that it should be performed in the hospital; and at a consultation held there on November 7th, the doubtful character of the tumor was recognized by the attending staff.

Operation (Presbyterian Hospital, November 7th).—The tumor had visibly increased in size since last seen. The measurements taken by the house surgeon, Dr. H. B. McCarroll, were as follows: long diameter, six and one half inches; vertical, five and a half.

An incision was made in the direction of the long axis of the tumor, dividing the skin and subcutaneous fat. The deep facias was then divided on a director, when it was found that the anterior border of the growth was covered by the lower border of the pectoralis major muscle. This was divided obliquely upward sufficiently to permit free access of the fingers, which were then principally used in freeing the growth from surrounding structures. A large lobe grew backward under cover of the anterior border of the latissimus, which was divided to afford more space; and there was then no further difficulty in enucleating the whole. The axilla was entirely emptied of everything, exposing the muscular boundaries and the vasculo-neural sheath that passes through it. The hemorrhage was insignificant, some of such vessels as were encountered being tied before, and others promptly after division. A drainage tube was introduced in the most dependent angle, and the edges were approximated by interrupted sutures, and covered with a pad of antiseptic cotton.

The structure of the tumor, to the naked eye, resembled that of the fresh section of a pancreas. It consisted of two lobes connected by an isthmus, and weighed five and a half ounces.

The child made an uninterrupted recovery, and was discharged from the hospital on the 14th.

Report of the Pathologist, Dr. Satterthwaite.—"The tumor removed from the axillary region by Dr. Briddon, November 7th, 1882, proved on microscopic examination to be a lipoma. In gross appearance it was lobulated throughout, separated by a constriction into two unequal halves, bluish pink color, quite different from that of most fatty tumors."

In evidence of the great difficulty sometimes encountered in the diagnosis of tumors it may be stated that there was absolutely nothing in the clinical history, or in the physical condition of this tumor, that appeared to warrant even a suspicion of its true nature. In fact, the pretty general impression of its malignancy led to a rather strenuous opposition to its removal, and at the meeting of this Society not a single member ventured to express an opinion from naked eye examination. Only the microscope revealed its character.

Dr. Furguson presented specimens illustrating varieties of

DIVERTICULUM OF THE SMALL INTESTINE.

There were six preparations, and they illustrated anomalies of fœtal development. Originally they were processes of the umbilical vesicle which communicated with the intestine; usually with the lower part of the jejunum or ileum. From the intestine they pass downward and forward a varying distance toward the umbilicus, which they sometimes joined. Their structure was the same as that of the intestine from which they proceeded.

They were of interest pathologically because they produced peritonitis and sometimes death in different ways. First, when the diverticulum was small, foreign bodies taken in with food might lodge in it and produce peritonitis and death. Secondly, the diverticulum might become adherent, by local inflammation, to the intestines or to the parietal peritoneum, etc., thus forming conditions favorable for the strangulation of part of the intestine. Thirdly, a diverticulum might have a partially developed mesentery, forming an opening through which a loop of the intestine could pass and become strangulated.

Dr. Ferguson also presented a specimen of

ANEURISM OF THE ABDOMINAL AORTA, INVOLVING THE SUPERIOR MESENTERIC ARTERY.

It was removed from the body of a man, forty years of age; United States; married; laborer; accustomed to heavy work. He gave a history of syphilis, and had been a constant drinker of ardent spirits for several years. He first noticed pulsation in the epigastrium four years ago. This was followed by constant pain in the back, and later on pain developed in the region of the pulsation. Within a time which he variously stated as ranging from one to two years, he noticed a tumor in the epigastric region; it was tender to pressure but otherwise it was not inconvenient. He gave a history of having received a blow in the epigastrium a short time previous to his admission, which was followed by symptoms of collapse. He was admitted into the New York Hospital on October 28th, 1882, and died the following afternoon with symptoms of internal hemorrhage. At the autopsy, there was considerable blood in the peritoneal cavity. Only the part presented was removed from the body. It consists of a section of the abdominal aorta four inches in length, connected with which was an aneurismal sac about three inches in diameter, containing recently coagulated blood and fibrin. This sac communicated with the aorta by an opening one inch in diameter. Extending from the upper and anterior part of this sac was the superior mesenteric artery, the first four inches of which were distended into an elongated sac, the wall of which was continuous with that of the sac below it. This portion of the artery was uniform in size, and about one and a half inch in diameter, and was filled with laminated fibrin.

The Society then went into executive session.—*News.*

NEW YORK ACADEMY OF MEDICINE. NOVEMBER 16th, 1882. FORDYCE BARKER, M.D., LL.D., President, in the chair.

The scientific paper of the evening was read by Dr. P. L. Morrow, and was entitled *Excision of Chancre as a Means of Aborting Syphilis.*

"Is it possible," said the author, "by excision of the initial lesion to destroy the syphilitic virus and prevent the infection of the general system? Such is the question which at the present time is engaging the serious attention of syphilologists both in this country and in Europe." The excision of the chancre was almost the universal practice of the profession until within a comparatively recent date. It then fell into disuse until about 1877, since which time it had been practised somewhat extensively in Germany, less so in France, and scarcely any in England and America. John Hunter, Benjamin Bell, and many others eminent in the profession at that time, believed that the general system became affected with the syphilitic virus secondarily to the local expression of the disease, and that therefore if the chancre were excised sufficiently early the disease would be aborted. If, as was claimed by the opponents of excision, the general system became contaminated immediately after the introduction of the virus, it would be useless to resort to local measures for aborting the disease. We were embarrassed, in the study of the subject, by our entire ignorance of the nature of the virus which produced syphilis. It could not be examined by microscopical or chemical tests. Our knowledge of it was altogether limited to its effects upon the organism. Considering the subject from analogy, the author of the paper thought that the mode of action of the poison in the acute exanthemata and in vaccination would probably sustain the view that the constitutional affection took place with the introduction of the syphilitic virus. Experiments on horses, by the introduction of the virus of glanders and cauterization or excision of the part within a few minutes afterward, lent support to this view. All the animals thus experimented upon took the disease and died. Dr. Morrow read a tabulated list of a number of cases in which excision or cauterization of the initial lesion had been performed by a large number of authors, giving also the number of failures and successes. Out of two hundred and twenty-two cases there were claimed only sixty successes. In drawing these conclusions, however, there were certain possibilities of error. First, a number of the experimenters were unicists, believing in the identity of chancre and chancroid. In the cases of chancroid, which was simply a local disease, as the author believed, of course no constitutional symptoms would manifest themselves, whether or not the local lesion were extirpated. Second, there might be doubts about the diagnosis, for in a number of these cases the lymphatic glands were not affected, and there was absence of signs which many regarded as necessary to establish a positive diagnosis of syphilis. Third, the insufficient observation to which the patient was subjected after the operation. Many of the patients were observed only four or five months—a period too short to justify the inference of the absence of syphilitic infection. Again, we knew that in many cases the early history of syphilis was very benign, the symptoms perhaps passing unrecognized ; but this was no indication that the tertiary symptoms would also prove to be mild. After quoting Ricord's views favoring the extirpation of the initial lesion, and pointing out the liabilities to error in drawing conclusions from his statements, Fournier was quoted to the effect that the initial chancre was the most insignificant of erosions, and when one cauterized what he supposed to be such, he did not know really what he was cauterizing, and he believed, therefore, that to cut away a chancre with the object of preventing infection was purely illusory.

The author referred to the method of excising the initial chancre, of extirpation by the cautery, and also to the practice of some of thorough cleanliness as a substitute of extirpation.

Some of the conclusions reached were : first, that the facts of clinical experience, as well as deductions from analogy and experiments, were opposed to the theory of the local nature of chancre upon which the practice of excision was based. Second, that the practice of excision of chancre as a means of aborting syphilis was condemned by its clinical results when these results are weighed in the balance of a discriminating judgment, due regard being had to the possibility of error. Again, there was no evidence that the excision of chancre modified the constitutional symptoms of syphilis, if they appeared, by making them milder. Nor could the practice, as a means of treating a local sore, be considered in harmony with the principles of sound surgery, since, if left alone, the induration would undergo spontaneous absorption and thus avoid the occurrence of a cicatrix.

DISCUSSION.

Dr. E. L. Keyes said the author of the paper had treated of the subject under consideration so exhaustively, and had so nearly expressed his own views, that it was unnecessary for him to add anything thereto. He did not believe that syphilis at the present time was so severe as it was in the fifteenth century. He read a part of a letter received from a physician who had been a resident of the Sandwich Islands for a number of years, in which it was stated that the population of those islands when the first census was taken, forty years ago, was 110,000, while to-day it was only about 40,000. This rapid falling off in the population was supposed to be due to the effect of syphilis introduced among a virgin people at the time of the discovery of the islands by Captain Cook. At that time the disease was unknown among this people. The custom of the natives was such as to favor a rapid extension of syphilis. It would be considered an insult among them if a man staying all night at a friend's house were not invited to sleep with the wife, nor could a woman refuse any man the liberty of her person without offering him an insult. In those people, however, among whom syphilis had existed for generations, the affection, according to Dr. Keyes's observation, proved to be almost uniformly of a mild type. He did not believe in the efficacy claimed for excision.

Dr. E. B. Bronson concurred in the views expressed in the paper, and said that he had performed excision of chancre in several cases, but he was unable to draw any definite conclusions as to the value of the practice.

Dr. G. H. Fox could accept the conclusions drawn by the author of the paper in most respects. He had performed excision of chancre in but two cases. In one, the constitutional symptoms did not follow; in the other, they occurred in a mild form. He himself was inclined to believe that syphilis was at first a local disease, and theoretically that excision would abort the constitutional symptoms, but he thought statistics showed that practically it did not. It was his opinion that the description of syphilis, as given by the older writers, was that of the severer cases, but that the average case was probably no more severe than the average case of the present day, which, indeed, was comparatively mild.

Dr. F. R. Sturgis heartily concurred in all that Dr. Morrow had read, and mentioned the fact that the absence of adenitis, which was true of many of the cases reported in which the chancre had been excised, cast a strong doubt upon the diagnosis of syphilis. The cases mentioned by the French authors were reported more in detail generally than were those reported by the Germans, and it would be seen that in every case in which the diagnosis of syphilis was further confirmed by the presence of adenitis, the constitutional effects followed excision of the chancre.

Dr. E. D. Bulkley had excised the chancre in but one case, and in that one constitutional syphilis followed in its severest form. He agreed in general with the conclusions drawn by the author, but it seemed that if in many of the cases reported a chancroid had been removed instead of a chancre, the effect upon the chancroidal lesion was beneficial, and it would be a proper operation to perform, whichever of the two lesions might be present.

Dr. R.W. Taylor had performed excision of the initial lesion of syphilis in fifteen cases, and in no case had it aborted the constitutional symptoms. In one case he had definite knowledge of the time of the contraction of the disease. On the twenty-first day after its contraction he washed the initial lesion with carbolized water, applied a little carbolic acid, then dusted it over with calomel, lifted up the chancre and cut it away, together with tissue for a quarter of an inch around it. The wound healed nicely within ten days. The patient had no enlargement of the glands. On the forty-fifth day the roseola broke out. The period of incubation seemed to be prolonged in some cases in which excision of the chancre had been performed, extending even to the seventieth and eightieth day. He believed that when the mercurial treatment was postponed until the second stage the cases did better than if this treatment were adopted earlier.

Dr. F. N. Otis thought that in order to discuss the subject intelligently we should consider the way in which the syphilitic poison entered the system. He then quoted authors in support of his view that the syphilitic germ, so to speak, entered the system through the lymphatic system, at first exciting a cell-proliferation at the point of the initial lesion, and it stood to reason that if it were practicable to excise this sufficiently early, before the neighboring glands were affected, the disease would be aborted. Whether or not this could be done early enough to abort the constitutional affection, he believed it was justifiable on the ground that it at least removed a large amount of the localized cell-proliferation, that it was often of great personal convenience to the patient, as it prevented the local erosion which might otherwise occur, and also seemed to make the constitutional symptoms, should they follow, milder. In the number of cases in which he had performed the operation, the cicatrix, if there were any produced, was very insignificant.

Dr. Morrow, in closing the discussion, said that while the symptoms of syphilis in the average patient might be comparatively mild, he did not think it could be regarded as a benignant affection when we consider its effects upon the fœtus in utero and upon the new-born infant. It occasions repeated abortions, and is very likely to cause death in children.—*Med. Times.*

New York Academy of Medicine. (*Philadelphia Times.*) Stated Meeting, November 2d, 1882. Dr. Fordyce Barker, M.D., President, in the chair.

Dr. W. E. Forest read a paper on "The Management of Labor with Reference to the Prevention of Subsequent Uterine Disease."

There was an unquestioned relation of cause and effect, said the author, between the puerperal state and uterine diseases. In one half of the cases of uterine disease the trouble dated from some previous confinement, and it became us, therefore, as obstetricians, to look and see if the responsibility rested in any degree upon us. He would strive first to make his remarks practical, and, secondly, to found his statements as far as possible upon anatomical and physiological facts.

Uterine disease as a sequel of labor might arise from two general conditions; first, laceration of the cervix and pelvic tissues; and, secondly, subinvolution of the uterus and vagina, with or without laceration. Laceration of the cervix was the first in time as well as in importance. The author then discussed the causes of lacerations and the manner of obviating them, and referred to the writings of Dr. Emmet and Dr. Sinclair, in which it appeared that the most frequent cause of laceration of the cervix was a rapid first stage of labor. Dr. Forest, however, did not believe that a rapid first stage of labor often produces laceration. He referred to statistics in support of his view, and stated that dilatation was a physiological and not a mechanical process ; it was really a relaxation rather than a dilatation. The preparation for this process commenced weeks before labor. There might be no more pressure upon the cervix in rapid than in tedious labor, since the cervix gave way or relaxed before the coming head. There was normally a harmony of action between the zones of the uterus in labor, and when this was disturbed by the abnormal nervous condition of the patient it should be restored by the administration of chloral, morphine, etc. Tedious labor, or rather tedious first stage of labor, had been pointed out as only a possible cause, not a most important cause, of laceration. Statistics, however, did not bear out this assumption ; on the contrary, it was shown to be a most frequent and important cause. This part of the subject was illustrated by diagrams made from frozen sections of the pelvic organs, going to prove that there were anatomical reasons why tedious labor should predispose to the accident of laceration. The external os did not dilate satisfactorily, the cervix became greatly lengthened and thinned, its natural resiliency was impaired, and after long-continued contraction of the body of the uterus, and pressure by the head, there was great liability to laceration of the cervix, either at the utero-cervical junction or at the os externum. The remedy was evident—namely, to prevent tedious labor by restoring the harmony of action between the body of the uterus above and the cervix below. Chloral and morphine were the agents usually employed, and their administration should not be delayed until the patient is worn out. Moderate doses should be given, so as not to paralyze the uterus, but so as to regulate nervous action. Gentle digital dilatation of the os was also a very important means of restoring harmony of action between the os externum and the lower uterine zone.

The author believed that the forceps, when used carefully, very seldom caused laceration. Abnormal presentation, and also premature rupture of the membranes, might act as a cause, but they could not be considered in detail on the present occasion.

Laceration having occurred, notwithstanding all our efforts to prevent it, what shall be done to avoid future uterine disease ? One important thing to be done was to keep the parts clean by injections of disinfectant solutions. To attempt to keep the lips of the wound in apposition by stitches was hardly to be thought of. He had in a few cases tried the slipping of an elastic band over the cervix, thus bringing the parts together, and the results had justified a further trial of the method.

With regard to subinvolution, Dr. Emmet had stated that he had never treated such a case without there being present also more or less laceration of the cervix. Statistics did not show that laceration of the perineum was a cause of this condition ; on the contrary, it seemed that subinvolution occurred less frequently when laceration of the perineum was present, and the author was of the opinion that this apparent paradox might be explained by the fact that stricter cleanliness was then observed. It was probable that if the laceration extended through the sphincter, or beyond it, involution would be interfered with. Septicæmia is a potent cause of subinvolution, even where it is so mild a case as to give rise to very slight elevation of temperature. Among the causes might also be considered loss of blood, general debility of the nervous system, and too early leaving the bed.

Dr. Beckwith was called upon to open the discussion, and said that there were many points of interest in the paper which might be discussed, but that he felt unable to do so without previous preparation. He spoke of the importance of always making a careful examination of the uterus and its appendages, and of the vagina, within six weeks after confinement.

Dr. Castle believed that a disparity between the size of the brim of the mother's pelvis and of the head of the child was sometimes the cause of laceration of the cervix instead of rigidity of the os, as was supposed. He believed that the softening which took place in the cervix up to the time of labor was a preparatory process to easy dilatation, and that the œdematous condition of the parts which led to it was therefore normal and desirable. Premature rupture of the bag of waters rendered laceration liable to occur.

Dr. C. C. Lee said there were many excellent points contained in the paper, with which he fully agreed. He had found that in the majority of cases in which the laceration was sufficiently extensive to attract the physician's attention, its origin could be traced to tedious labor, and he believed that the accident took place because of the œdematous or macerated condition of the tissues which was then present. Laceration had occurred very seldom, according to his observation, in cases of rapid labor. He referred to the presence of arterial hemorrhage as an indication of laceration. The source of the hemmorrhage might be discovered by making an examination with the Sims speculum. As to the treatment of laceration when it was present, he had done the immediate operation for restoration of the parts in two cases. In the first case, that of a primipara, he used silk sutures, but within two days they tore through the tissues, and the result was a complete failure. The second case was that of a multipara, and the wire suture was used, but the result was the same as in the former case. With regard to the use of the elastic band, he could not understand how it could be kept on the parts. An important reason for hastening a tedious labor had not been mentioned: viz., the fact that this was the origin of nearly all cases of vesico-vaginal fistula. He fully agreed with the author of the paper as to the manner of hastening tedious labor by the administration of the drugs which tended to restore the nervous system to its normal condition, and by resorting to manual dilatation.

Dr. W. T. Lusk said it was considered a great recommendation of the accoucheur among women if it were said of him that he never lost a case. He thought, however, that in the future the accoucheur's merits would be estimated rather by the health of his patients some time after delivery. There were two classes of cases of rapid labor: one was that in which the patient's nervous system was in such an abnormal condition as to lead her to bear down strongly almost from the beginning of labor, and in such cases bad laceration of the cervix was liable to take place. He did not believe that digital dilatation of the cervix was often justifiable. Instead thereof he used Barnes's dilator, which rendered the cervix simply tense and tended to excite normal uterine pains. Under its use the cervix became soft, regular pains took place, and the dilator was expelled. If found necessary, it could be reinserted. He criticised severely the practice pursued by some accoucheurs of making traction upon the forceps during uterine pain, at which time the tissues were rendered rigid and were therefore in great danger of being ruptured by such a procedure. Traction should always be made during the intervals between pains.

Dr. S. T. Hubbard thought that in the case of the statistics quoted by Dr. Forest an examination of the condition of the pelvic organs should have been made twenty days after confinement, and then, probably, in many of the cases where laceration had been found at the sixteenth day the wound would have been found to have healed. Fifteen or twenty drops of laudanum often prove of great benefit in certain cases of tedious labor.—*News.*

NOTE ON MESENTERIC CYSTS AND TUMORS. By T. SPENCER WELLS, President of the Royal College of Surgeons; Surgeon to the Queen's Household.

Up to the date of the publication of my last work on "Ovarian and Uterine Tumors," I had not met with any cases of mesenteric cysts or tumors. In the chapter on diagnosis, I had spoken of collections of fluid in the peritoneal cavity more or less completely encysted by adhesions — of hydatid cysts — of peritoneal cancer—and of fibro-plastic and fatty tumors of the peritoneum, of the omentum, and of the sub-peritoneal cellular tissue. But I had not then read Mr. Doran's interesting case of cyst of the great omentum, published in the "Obstetrical Transactions" (vol. 23, page 165); nor had I ever seen a solid tumor of the mesentery. During the past summer, however, I have seen one case closely resembling Mr. Doran's, with Dr. Duke, of St. Leonard's, but which appeared to be rather mesenteric than omental. I did not attempt to remove the cyst, only removing the fluid contents. The lady died a few weeks afterward; and, as no examination of the body was permitted, I cannot say more of the case. About the same time, I removed a large solid mesenteric tumor from a married lady, forty years of age, a patient of Mr. Arthur Jackson, of Sheffield. She had been married eighteen years, but had no children, though she had a premature labor some months after marriage. Two or three early abortions followed, and no further pregnancy. She was in good health until about four years ago, when pain in the iliac regions and slight abdominal enlargement was noticed; but no tumor was discovered until early in 1881. After that, increase was very manifest, with some apparent diminution after each menstrual period. Various opinions were given as to the nature of the tumor—some believing it to be ovarian, others uterine. I frankly confessed my own inability to give a very positive opinion as to its nature or connections; but expressed a very confident belief that I could remove it without any unusual difficulty or danger. It was quite solid, central in the abdomen, freely movable, about the size of an adult head, and imparting transmitted rather than associated movements to a uterus somewhat enlarged. I removed the tumor on June 20th, 1882, at Sheffield. Mr. Shaw kept the patient in a state of perfect anæsthesia with bichloride of methylene, and I was ably assisted by Mr. Arthur Jackson, Mr.

Favell, and Dr. Redpath. Phenolized spray and all the usual antiseptic precautions and dressings were carefully employed. The tumor was solid, and its origin was clearly in the cellular tissue, at the root of the mesentery proper, near the lumbar vertebræ. The ascending colon was closely connected with the tumor in front, and to the right. All its blood-supply was derived from the mesenteric vessels. Those which were divided were secured with carbolized silk, the ends of all the ligatures cut off short, and returned. The uterus and both ovaries were healthy. No drainage was employed, and the wound was closed exactly as after ovariotomy. There was some sickness during the first three days; but recovery may be said to have followed without fever. The highest temperature was on the third day, but was only 100°. The patient left her bed on July 12th, and I have heard of her lately as being well.

The tumor was sent to the Sheffield Pathological Society for examination and report. I have not yet received the report; but I hope it will be forwarded, as the removal of a solid mesenteric tumor may still be regarded as a surgical curiosity.—*British Medical Journal.*

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ORIGINAL CORRESPONDENCE.

TUPELO, MISS., December 2, 1882.

E. S. GAILLARD, M.D.

DEAR SIR: If you consider the following report of a case of complicated labor of sufficient interest to the readers of your valuable weekly, you are at liberty to publish it.

I was called on the 16th November to see Mrs. L. in her fourth confinement, found Drs. Boggan and McWilliams in attendance. Patient had been in labor ten hours. The shoulder presented complicated with placenta prævia, the bag of waters had ruptured, and a portion of the placenta detached, causing alarming hemorrhage. I introduced my hand without delay, separating remaining portion of placenta, and on reaching the foot delivered as rapidly as possible.

Of course the child was dead, but the mother survived, and at this writing is doing well. The unusual features in this case was the shoulder presentation complicated with placenta prævia, which necessitates the loss of the child, and to an alarming extent compromises the life of the mother.

Yours very truly,
J. W. FRAZER, M.D.

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REVIEWS.

A MANUAL OF HYPODERMATIC MEDICATION. THE TREATMENT OF DISEASE BY THE HYPODERMATIC METHOD. By ROBERTS BARTHOLOW, M.D., LL.D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College. Philadelphia: J. B. Lippincott & Co. 1882.

This is the fourth edition since 1869. But little more need be said in its praise. It is thoroughly revised and materially enlarged. It furnishes the most complete description of such medication in the English language, and, with this, a faithful analysis and description of the various drugs and medicines used in this connection. No work on this subject can be compared with it, and it is a book that every physician should procure and faithfully study. He will be amply rewarded.

While the author admits that medicines were used hypodermically by Lafargue in 1836, and by Drs. Taylor and Washington in 1839, he dates the art of "hypodermatic medication" from 1855.

His effort to change the technology from hypodermic to hypodermatic will not be successful. The old word, though young, is too old to be set aside. Even if etymology demanded such a change, which is denied, the effort would be useless. Does one suppose that because the word artery means a carrier of air and is therefore etymologically wrong, that it could be changed, or should be? "Hypodermic" is as a word etymologically correct, and should not be disturbed. When the author uses the words endermic, and subdermic, how can he object to the the word hypodermic and seek to change it? *Non quieta movere.*

SPEECH AND ITS DEFECTS, CONSIDERED PHYSIOLOGICALLY, PATHOLOGICALLY, HISTORICALLY, AND REMEDIALLY. By SAMUEL O. L. POTTER, M.D. Philadelphia: P. Blakiston, Son & Co. 12mo, pp. 114. Price, cloth, $1.00.

The author presented this essay as a thesis at the period of his graduation. It was so excellent for a student that it received the Lea prize.

It is, in brief, an essay on stammering and stuttering, and is so good that all interested in this subject should obtain it. He gives also at the end of the volume a full bibliography of the subject. All of the best means of relief are clearly and simply set forth, and this portion of the volume is alone worth the price of the book. The devices of peripatetic and advertising impostors are fully exposed. It is a most creditable production.

MEDICAL ELECTRICITY. A PRACTICAL TREATISE ON THE APPLICATION OF ELECTRICITY TO MEDICINE AND SURGERY. By ROBERTS BARTHOLOW, A.M., M.D., ETC. Second Edition, Englarged, with 109 Illustrations, Philadelphia: H. C. Lea's Son & Co. 1882. Cloth, pp. 286.

While hosts of the best physicians feel an overwhelming scepticism, and an irresistible distrust in connection with the subject of electrical therapeutics, many, on the other hand. are enthusiasts in regard to it, and believe, with Job, that wisdom will die with them. As a rule books on this subject seem to be written with the ideas of Talleyrand paramount, that language should conceal the meaning; and the technology employed is, as a rule, intelligible only to experts and usless to physicians. This work is an exception to almost all others. It seems to be written for physicians and not for "electro-therapeutists" (this is now the term, it is believed), and is easily intelligible to every practitioner. It is concisely written, and the author's diction is simple and always comprehensible.

This edition is larger than the first, and well represents the science of medical electricity at the present time.

Every physician must use electricity in his practice, and in doing so he can have no better guide and companion than this volume.

As the first edition was carefully reviewed, no more is now deemed necessary.

MANUAL OF DENTAL SURGERY AND PATHOLOGY. By ALFRED COLEMAN, L.R.C.P., F.R.C.S., EXAM., L.D.S., ETC.; Senior Dental Surgeon and Lecturer on Dental Surgery at St. Bartholowmew's Hospital and to the Dental Hospital of London, etc. Thoroughly revised and adapted to the use of American Students and Practitioners. By Thomas C. Stellwagen, M.A., M.D., D.D.S., Professor Physiology, Philadelphia Medical College. 8vo., pp. 408. Philadelphia: Henry C. Lea's Son & Co. 1882. Price in muslin, $3.25.

A very large number of physicians remote from populous centres, and scattered along the bridle-paths of a pioneer civilization, are compelled to do some dental work. To them the old "hawk's-bill" and forceps are not rarely reminders of what doctors had once to do, but what they have at times to do now. To all such practitioners, a useful, intelligible and practical guide is a necessity; and this work will be for this purpose eminently satisfactory. The original book is very superior, and the American edition is an improvement upon it. No one can have a better guide.

NEW BOOKS RECEIVED.

Diseases of the Rectum. Kelsey. Wm. Wood & Co.

Practical Medical Anatomy. Ranney. Wm. Wood & Co.

Asthma, its Pathology and Treatment. Sutten. Wm. Wood & Co.

Materia Medica and Therapeutics. Phillips. Wm. Wood & Co.

Mental Pathology. Griesinger. Wm. Wood & Co.

Pneumonia, Gout and Allied Diseases. Longstreth. Wm. Wood & Co.

Pharmacopœia of the United States. Sixth Decennial Revision. Wm. Wood & Co.

Medical Record Visiting List. Wm. Wood & Co.

Practice of Medicine. Bartholow. D. Appleton & Co.

College Announcements for the Session of 1882–3, Received. Michigan Medical College, Detroit, Mich. ; Detroit Medical College, Detroit Mich. ; Bellevue Medical College, New York ; St. Louis Medical College, St. Louis, Mo. ; California Medical College (Eclectic) ; University of Buffalo, Medical Department ; New York College of Physicians and Surgeons, New York ; Medical College of Ohio, Cincinnati, O. ; Rush Medical College, Chicago, Ill. ; University of the City of New York ; Medical Department, University of Louisville ; Medical Department, College of Physicians and Surgeons—a new venture for the higher education of physicians ; Iowa Eclectic Medical College, Des Moines, Iowa ; Medical College of Virginia, Richmond, Va. ; Missouri Medical College, St Louis ; St. Louis College of Physicians and Surgeons ; Woman's Medical College of Chicago.

Diseases of the Liver. Hardey. P. Blakiston, Son & Co.

Microscopical Diagnosis. Stowell. Geo. S. Davis. Detroit.

Quiz Compends-Anatomy. Potter. P. Blakiston, Son & Co.

Speech and its Defects. Potter. P Blakiston, Son & Co.

Visiting List. P. Blakiston, Son & Co.

Physicians' Day-Book. Leonard. Detroit.

Physicians' Call-Book Ralph Walsh. Washington, D C.

Hypodermatic Medication. Bartholow. J. B. Lippincott & Co.

Medical Electricity. Bartholow. H. C. Lea's Son & Co.

Ashhurst's Surgery. Third Edition. H. C. Lea's Son & Co.

Cornil on Syphilis. H. C. Lea's Son & Co.

Farquharson's Therapeutics. Woodbury. H. C. Lea's Son & Co.

Practical Laboratory Course. Draper. Wm. Wood & Co.

Diseases of Women. Graily Hewitt. P. Blakiston, Son & Co.

Diseases of the Rectum. Allingham. P. Blakiston, Son & Co.

Lacerations of the Perineum. D. Hayes Agnew. P. Blakiston, Son & Co.

Sore Throat. Professor James. P. Blakiston, Son & Co.

THE PRINCIPLES AND PRACTICE OF SURGERY. By JOHN ASHHURST, JR., M.D., Professor Clinical Surgery in University of Pennsylvania, etc. Third Edition. 8vo, pp. 1064. Philadelphia : H. C. Lea's Son & Co. 1882.

It is rare for any work of this character to reach a third edition in so short a space of time ; and so deservedly.

The author is well known as a careful writer, a good scholar, a conscientious teacher, and an efficient and judicious surgeon. He has the great merit of writing comprehensively and concisely, and, in one volume, he has introduced clearly and instructively all of the subjects usually presented in a work of this kind.

As a book of reference, it is of great value : salient points are succinctly and clearly presented ; while for leisurely study, the student cannot find as much information faithfully presented in any surgical work now before the profession. The present edition fully represents surgery, both as a science and an art, at the present day ; and there is no volume which will be more valued, even in a large and abundant library.

The illustrations are all good, and many of them are new. The publishers have issued the work in a style fully commensurate with its merits.

CLINICAL LECTURES ON THE DISEASES OF THE NERVOUS SYSTEM. By THOMAS BUZZARD, M.D., London, etc. 8vo, pp. 466. Philadelphia : P. Blakiston, Son & Co., 1882.

This work contains one of the best presentations of the subject of tabes dorsalis to be found in medical literature. All of the changes—gastric, gastro-intestinal, the arthritic, medullary, neurotic, etc., are faithfully and clearly given.

Infantile paralysis is also carefully and instructively considered, and in this connection the good results of electro-therapeutics are well presented.

Paraplegia is carefully analyzed, and the cervical and syphilitic forms receive especial attention.

The author is no compiler, but a master of his subjects. He writes from practice, and not for it.

It would be difficult to indicate a work which, in the subjects indicated, is more satisfactory and valuable. It is well issued.

ON ASTHMA : ITS PATHOLOGY AND TREATMENT. By HENRY H. SALTER, M.D., F.R.S. First American from the last English Edition. New York : William Wood & Co., 1882.

Every physician is called upon to treat

asthma. Every one succeeds occasionally, but fails generally. Every one feels that both as a physician and friend he is particularly anxious to be enabled to give relief, for in no disease is this more absolute and welcome. A book on this subject is one that every practitioner ought to have, and will have it if obtainable. It is not too much to say that this is the best work on the subject. Etiology, symptomatology, clinical history, prognosis are carefully considered, and on the subject of treatment the author is beyond all competitors. Theories are fully discussed also, but the work is eminently practical. It is a volume of standard value.

MICROSCOPICAL DIAGNOSIS. BY CHARLES H. STOWELL, M.D., Assistant Professor of Histology and Microscopy in the University of Michigan, and LOUISA REED STOWELL, M.S., Assistant in Microscopical Botany in the University of Michigan. Illustrated with one hundred and twenty-eight engravings on wood and forty-seven figures on stone. Detroit, Mich.: Geo. S. Davis, publisher. 1882.

The first portion of this work is by Dr. Stowell, and treats of the microscope and its aid in diagnosis, in examinations of the sputa, urine, urinary deposits, blood, epithelium, tumors, excreta, etc.

The second part is by Mrs. Stowell, and is devoted chiefly to a study of histological botany with reference to foods and medicinal plants. It is a unique and valuable contribution. The book is very prettily issued, and will be found very useful, chiefly to those who are not adepts in the art of the microscope, viz: the general practitioner. As a rule, works on the microscope are not useful to beginners, because they are too technical and abstruse. This book will be valued and enjoyed by every one, and is very much such a guide as is generally needed.

Mr. W. H. Wolmsley, contributes a valuable fasciculus on the mounting of microscopes.

The work is handsomely illustrated.

FISTULA, HEMORRHOIDS, PAINFUL ULCER, STRICTURE, PROLAPSUS, AND OTHER DISEASES OF THE RECTUM. BY WILLIAM ALLINGHAM, M.D., F.R.C.S., etc. Fourth edition. Illustrated. Philadelphia: P. Blakiston, Son & Co. 1882.

This book has always been a great favorite, and deservedly so. It is practical in tone and character, magisterial in its teaching, and valuable in showing operative results. It is by an author who, as an authority, has no superior. It has been always highly esteemed and found to be safe and efficient. Three editions have been noticed in this journal, and it is a pleasure to find the judgment expressed has been so fully verified.

ESSENTIALS OF VACCINATION. BY W. A. HARDAWAY, M.D., St. Louis. Chicago: Jansen, McClurg & Co., 1882.

This book is a compilation, and the author does not pretend to offer the results of any original work. There is nothing, however, in these facts to render the book less valuable or useful. It is written in clear and correct diction, easily read, interesting, and instructive. If any one desires to obtain briefly very important facts in regard to the history of vaccination, and to read also what is practically interesting, relative to the mode of operating, the results, complications, etc., this little book can be cheerfully recommended to him.

VISITING LISTS.

The number of these useful little publications continues to increase, and now the list is becoming a long one; Lindsay & Blakiston's; Walsh's; Wood's (the Record list); Elmer's; Brinton's; Leonard's. These have been received; already several others will no doubt appear in January. The first is the oldest; the second, ingeniously arranged; the third, the most elegant; fourth, the largest; fifth, most easily kept; sixth, most economical and simple. They differ, as a rule, however, so little, that any one of them will be found to answer the purpose well.

STUDIES IN PATHOLOGICAL ANATOMY. BY FRANCIS DELAFIELD, M.D., Adjunct Professor of Pathology and Practice of Medicine in the College of Physicians and Surgeons; Visiting Physician and Pathologist of the Roosevelt Hospital; Visiting Physician and Curator of Bellevue Hospital. Royal 8vo, pp. 126. New York: Wm. Wood & Co.

This work first appeared as a serial. The fasciculi are now presented in one volume, beautifully illustrated. While it will not find a large demand, as, unfortunately, few really study fully pathological anatomy, the work is, nevertheless, one of great merit and value; an excellent and faithful guide, and a monument of rare research, honest record, and extensive experience. It is an honor to any one, however high may be his position.

HYGIENIC AND SANITATIVE MEASURES FOR CHRONIC CATARRHAL INFLAMMATION OF THE NOSE, THROAT, AND EARS. By THOMAS F. RUMBOLD, M.D., Professor of the Diseases of the Nose, Throat, and Ears in the College for Medical Practitioners of St. Louis, etc. Medical Journal Publishing Co. 1882.

The characteristics of this work are the reliance upon nature in the management of the varied morbid conditions enumerated, and the simplicity of treatment, when treatment is regarded necessary. It is a popular book, and especially among those who are not specialists. To the general practitioner it is very attractive, and deservedly so. The scope of the work is not large, and the author recognizes the fact, in this, that there are many diseases in his specialty which cannot be treated by the methods proposed, but which need instrumentation and experience. It is a good manual.

RHEUMATISM, GOUT, AND SOME ALLIED DISORDERS. By MORRIS LONGSTRETH, M.D. Wm. Wood & Co., New York, 1882.

This is one of the most complete treatises on these subjects to be found in the modern medical library. Its scope is large, well defined, and masterly. Every line evinces experience, judgment, learning, and fidelity; a most rare combination of excellencies in an author. Every physician needs the fullest possible information upon these diseases, and it would be impossible to say where he can find all that he thus needs, so well as in this volume. The sections upon pathology and treatment are especially excellent.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON GENERAL'S OFFICE, U. S. A. Vol. III.

This very valuable work is progressing as rapidly as the appropriations permit. Every one who is interested in medical literature, or in the life of any branch of medical science, cannot but wish that the means were at hand to finish it completely and promptly. Its numerous references will save years of labor to the earnest student, and offer a ready means to ascertain what has already been done by previous workers in science.

The present volume extends from the word *Cholecyanin* to *Dzondi*, so that it is evident, in spite of its 1020 large, double-column quarto pages, that we have long yet to wait before it is finished.

THE ANNUAL REPORT OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY FOR 1882 is received.

The report is based upon an average mean strength of 20,778 white, 2265 colored troops, and 245 Indian scouts. It contains some interesting statistical matter concerning the mortality in the army, both from disease and from wounds and accidents. The medical library of the Department at Washington now numbers 57,000 volumes and 63,700 pamphlets. By means of the enormously expensive catalogue now in course of preparation, this great mass of literature is being made available to the whole profession of the country.

MISCELLANEOUS.

TUBERCULOSIS OF URINARY APPARATUS. — Mr. Reginald Harrison reports, in the *Lancet*, a condition of affairs occurring in a patient in the Liverpool Royal Infirmary, to which the term "Urinary Phthisis" has been applied. He had seen a good many instances of it in hospital practice, the patients being usually sent there on the suspicion that they were suffering from stone. The symptoms of urinary tuberculosis so closely resembled those of stone that an examination of the bladder with the sound was unavoidable. Under all circumstances it was necessary that such an examination should be conducted with the greatest gentleness and delicacy. This condition consists essentially in tubercular deposits and ulcerations of the urinary organs, while similar deposits usually exist elsewhere throughout the body.

AT the time of the plague in London, a noted body-searcher lived whose name was Snacks. His business increased so fast that, finding he could not compass it, he offered to any person who should join him in his burdened practice half the profits; thus those who joined him were said to go with Snacks. Hence going snacks, or dividing the spoil. — (*Morning Herald*, in London *Lancet*, Oct. 6th, 1823.)

EFFECTS OF PUERPERAL SECRETIONS ON THE ORGANISM.—The *Edinburgh Medical Journal* says that Karewsky has made a number of careful inoculation experiments on this subject, with the following results :

1. All lochia, normal as well as septic, are able to produce septicæmic and ichorhæmic disease in animals. 2. The virulence of the discharge increases with the duration of the puerperium, and during puerperal diseases. 3. When symptoms of septicæmia appeared a spheroidal fungus was found in the organs of all the affected animals. 4. Diseases produced in this way are communicable to healthy animals. The fungus derived undoubtedly from the adjacent air, finds in the genital tract an extremely favorable seat for further development. The inoculated cases differed from each other only in degree. The globular micrococcus found in all the cases is evidently the *materies morbi*, although, of course, it is not a specific "*micrococcus puerperalis*."

THE CRADLE OF AMERICAN MEDICINE.—The following is from the Michigan *Medical News*. Philadelphians are now advancing reasons calculated to establish their city as the cradle of American medicine : The first practical instruction in anatomy in America was by Dr. Thomas Cadwalader, in 1750 ; the first permanent general hospital was founded there, in 1752 ; the first clinical instruction in America was given there by Dr. Thomas Hurd, in 1756 ; the first medical library in America was founded there, in 1763 ; the first medical society in America was organized there, in 1766 ; the first medical dispensary in America was established there, in 1786, and the first American medical college was organized there, in 1765.

SMALL-POX IN AUSTRALIA.—In the *Australian Medical Journal* for May and June, 1882, is an account and discussion on the "First case of Small-pox in Melbourne in 1882." The case is related by Dr. Bates Headley, and from his description of it, there cannot be the shadow of a doubt that the case was an example of confluent small-pox. The point of interest in the case, however, is that small-pox is so rare in Melbourne that the doctors of the place rarely see it, and consequently know very little of it. Happy Melbourne ! This may be due in some measure to the remarkable fear of it which exists in Melbourne, and to the consequent extreme precautions which are taken against it. The extent of these will be seen from the following extract from a report by Dr. Thomas S. Bulwer, health officer, in which he says : "April 20—No one is allowed to approach the S's (the patients) or the nurse. I myself give instructions at a distance, and receive reports the same way from the nurse." Unhappy patients !

FROZEN PEOPLE. — It has been a mooted question what would be the best way to resuscitate those frozen. Laptschinski seems to have settled the question. Of twenty animals gradually brought to in a cold room, fourteen died ; of twenty introduced at once into a warm room, eight died ; of twenty placed immediately in a hot bath, all recovered.

IMMEDIATE UNION AFTER CIRCUMCISION FOR PHIMOSIS COMPLICATING SIMPLE CHANCRE.—M. Aubert reports (*Lyon Med.*, No. 9, 1882) six cases in which he obtained primary union after circumcision for phimosis with soft chancres. In two cases there was œdema, and in one lymphitis, and abscess of the penis. The following is M. Aubert's method of operating: All the surrounding parts are cleansed with carbolic lotion. The penis is then passed through a hole cut in a large sheet of India-rubber sheeting, so that discharge and blood may not collect among the pubic hair, and so become a source of reinoculation of the wound. The patient is then anæsthetized, and all the sores which are within reach are touched with the thermocautery.

TO RESTORE FADED INK.—In order to restore faded ink, all that is necessary, according to the Boston *Journal of Chemistry*, is to moisten the paper with water and brush over the writing with a solution of sulphide of ammonia. The ink will become black immediately from the formation of the black sulphide of iron. Of course this means of restoration is not applicable with pure aniline inks.

LIQUID OZONE.—Pure liquid ozone is said, by an Eastern exchange, to have been obtained by MM. Hautefeuille and Chappius. They compressed a mixture of oxygen and ozone under 125 atmospheres, and cooled the end of the tube with a jet of liquid ethylene. On suddenly releasing the pressure a drop was observed at the end of the tube having a deep indigo-blue liquid, while the gas above it was colorless, but when the liquid disappeared the whole contents of the tube assumed its color to a certain degree.

THE SURGICAL TREATMENT OF FACIAL NEURALGIA.—We understand that Mr. Chavasse's case of excision of Meckel's ganglion and the superior maxillary nerve, is the first operation of the kind performed in the British Isles. In February 1880, Mr. Walsham stretched the infra-orbital nerve, the patient being a woman, aged 50, subject to intractable neuralgia—a case, in fact, precisely similar to Mr. Chavasse's; it is recorded in an original article, by the operator himself, in the JOURNAL, vol. ii, 1880, page 1009. We are informed that this patient has never suffered from any recurrence of the neuralgic pain since the stretching of the infra-orbital nerve; and, also, that before the operation, removal of the spheno-palatine ganglion was proposed. The patient, however, expressly stipulated that she would not consent to any operation being performed, unless first assured that it did not entail the slightest risk to life. Mr. Walsham, moreover, was not strongly in favor of removal of the ganglion; and, it must be borne in mind, that he concludes the article above referred to, by observing that a morbid condition of the spheno-maxillary ganglion had, at that period, already been suggested as a cause of intractable facial neuralgia; and the ganglion had already been removed several times. It is, however, not improbable, the author added, that as the superior maxillary nerve must be stretched in the operation, the benefit obtained might be traced to the stretching of the nerve rather that to the removal of the ganglion. The fact that both stretching and excision of portions of the second division of the fifth pair of cerebral nerves have been performed more than once shows, at least, that facial neuralgia may resist all palliative treatment, that sufferers from this intractable disease may urgently desire operative interference, and that competent authorities and operators are not quite decided as to the superior merits of one out of two measures. No satisfactory decision will be obtained until many more such operations are performed, with the most scrupulous comparisons of results, as gleaned from histories of the course of the cases for years after the operations.

ISOLATION IN THE PARIS MATERNITE.—M. Tarnier, in a letter recently addressed to the Soc. Médic. des Hôpitaux, recalls the very extraordinary results obtained by isolation, the use of antiseptics, and all means proper to ward off contagion. In the new pavilion he has had constructed, in which each chamber can only be entered by a separate door opening outwardly, without any aperture toward the hospital except a single large pane of glass let into the wall, permitting the surveillance of the patients, he has had but 6 deaths in 1200 cases of labor. Within the past few years even there have been 600 cases without a single death. No statistics ever published have shown such favorable results as these of M. Tarnier.

REMARKABLE SURGICAL OPERATION.—The Paris Academy of Medicine was yesterday informed by the operator that the young man on whom an operation was performed for the extraction of a spoon from his stomach has completely recovered from the effects of the hazardous operation, and is now enjoying his usual health. Interesting particulars are given of this operation, which was performed by Dr. Felizet. By the use of the Faucher tube introduced through the mouth the stomach was cleansed prior to the novel operation, which prevented the risk of peritonitis. An incision was then made in the epigastric region. In order to render the coat of the stomach easily accessible, M. Felizet employed the following contrivance: To the end projecting from the man's mouth he fitted a spherical vessel containing ether. This he heated by submersion in water of sixty degrees temperature. The ether vapor rushing through the tube filled the stomach, which, becoming distended, was brought forward to the wound effected by the operator's knife. The spoon was thus readily found and extracted. It measured over nine inches. It had been accidentally swallowed by the man, a waiter at a café, in the attempt to imitate the feats of the famous sword-swallower.—*Paris Correspondence of the London Standard*, October 7th.

RUPTURE OF UTERUS DURING PARTURITION, WITH PROTRUSION OF INTESTINES—RECOVERY.—Dr. D. W. Bullock reports the following rare case. A colored woman, thirty-five years of age, in labor with the eighth child, had been in labor for eight hours, when she had a very violent uterine contraction, with severe pain, followed by faintness and free flow of blood. It was a hand and knee presentation; the head of the child and right shoulder and arm escaped through a rent into the peritoneal cavity. Intestines shortly afterward protruded from the vulva. Stimulants were given freely, the child delivered by the feet, and the placenta removed. The intestines were pushed back and held with the hand until ergot and massage produced uterine contraction, when the rent was closed. Septæmia occurred, but by free use of antiseptic drinks, and carbolic acid internally, which the reporter believes has more power over the condition than quinine, salicylic acid, or any other remedy that he had tried, in six weeks the patient had entirely recovered.—*North Carolina Medical Journal*, July 1882.

THE TREATMENT OF INTUSSUSCEPTION.—In the September number of the *New York Medical Journal and*

Obstetrical Review Dr. W. R. Gillette, Physician to Bellevue Hospital, relates a case of intussusception in a child nine months old, relieved by injections of water, the administration of chloroform by inhalation, and manipulation of the tumor felt through the abdominal wall. This, he states, is the third case of intussusception in infants which he has seen, and which he has been able to reduce by these means. He thinks that these cases, from the philosophy of their condition, and the necessary measures for relief, are best managed in the way indicated. In two other instances, in which he saw and advised this treatment, reduction was utterly impossible under the other methods tried. The children in each of these cases were held while struggling, and the injections forced into them against all voluntary and involuntary efforts which they could make. He deems the administration of chloroform almost absolutely necessary in these cases. The reason is not difficult to find, inasmuch as, while it gives us such perfect control of the patient, it also eliminates the element of muscular spasm. Moreover, massage is a powerful adjuvant to the hydrostatic pressure of water in these cases. In the first two cases the obstruction was not overcome until massage also was employed.

REPAIRING AN INJURED EYE.—At the Jefferson College Hospital, Philadelphia, September 29th, Dr. H. L. Little transplanted a portion of the conjunctiva of a rabbit's eye to that of a young Irishman, whose eye had been badly burned by sulphuric acid. Dr. Little removed the eye-lid from its firm adhesion to the ball, and made it ready for the new piece of membrane, which Dr. L. W. Fox, assisted by Dr. Hewson, had carefully dissected from the left eye of the unconscious rabbit, and the part was rapidly transferred to the under surface of the man's eyelid and neatly stitched to its place. Another operation will be performed that will, it is thought, restore sight to the injured eye.

A PHENOMENAL CANARY.—There is at present in the possession of Dr. J. McGrigor Croft, a canary bird, which, beside giving utterance to delicious warblings, is also able to " talk " with a clearness and precision simply marvellous. The canary does veritably *speak* and enunciates a number of sentences which are clearly imitative of the voice of the lady who has had care of it since its early youth. The effect, indeed, produced by the clear, sweetly-uttered sentences pronounced by the bird is almost weird at first ; but the feeling of wonder thus created quickly gives rise to a sensation of exquisite pleasure, which is deepened as the little creature suddenly, at the end of a sentence, rushes off into an ecstasy of song.—*Dublin Press and Gazette.*

SPONTANEOUS RUPTURE OF THE SPLEEN.—A case of this kind is reported by Dr. F. M. Calkins, in the *Michigan Medical News.* It occurred during the night, in a woman, aged 45, in her usual health, who had suffered from malaria and enlargement of the spleen, which was located midway within the left lumbar and inguinal spaces. The rent was in the inferior and convex surface, and was 5½ inches in length. The spleen weighed 2 lbs. 10 oz., and the amount of blood effused was six and a half pounds.

CONTRACTION OF THE VESSELS IN A LIMB REMAINING AFTER AMPUTATION.—Dr. Paul Segond, in a study of the changes occurring in the vessels of a limb from which a portion has been removed by amputation, arrives at the following conclusions : After an amputation, the arteries and veins of the affected limb undergo a notable diminution in size. This is observed even where the member removed is but a small part of the entire limb, as in hand or foot amputations. The reduction of the blood supply takes place, not only in the stump, but in the whole extremity. The diminution in the calibre of the vessels follows immediately upon the amputation and is not consecutive to the atrophy of the soft parts. It may indeed play an important rolê in the pathogenesis of this atrophy.—*Revue de Chirurgie.*

A SEVERE OPERATION.—At the Surgical Section of the Association of German Naturalists and Physicians, Professor König showed a patient in whom he removed the greater portion of the sternum, which was the seat of a rapidly growing osteo-sarcomatous growth. The whole of the sternum, except the uppermost part and the xiphoid process, was removed, and during the operation air entered both pleural cavities, and also the pericardium, which was found adherent to the sternum, and was opened during the operation. The patient made a good recovery, and the wound is now almost entirely healed, except at one point, where a portion of an adjacent rib is necrotic and keeps up some little suppuration.—*Record.*

PERIODICAL SORE THROAT RECURRING AT EACH MENSTRUAL EPOCH.—Dr. Genet (*Journal de Médecin et Chirurgie*, October, 1882) describes a sore throat which makes its appearance with great regularity a few days before each menstrual period, and subsides upon the appearance of the catamenial flow. It is characterized by a slight sensation of dryness in the throat, with thirst, and a little tickling cough. There is neither fever, headache, foul breath, nor any actual pain in the throat. Examination shows a slight redness of the fauces, and a little swelling of the tonsils. The affection lasts two or three days and disappears immediately upon the establishment of the menstrual flow. At the menopause, when the courses become irregular, the sore throat ceases to appear every month, but is observed only before the catamenia, at whatever time the flow may occur.

SPONTANEOUS DISCHARGE OF AN HEPATIC ABSCESS INTO THE BRONCHI. —Dr. Menacho relates the following case : A woman, sixty years of age, though living in a marshy district, had never had malarial fever. There was no enlargement of the spleen. Without any marked hepatitis there was developed an abscess of the liver, characterized by a tumor easily distinguished on palpation. For several days she suffered from difficult respiration, which only subsided after the expectoration of a considerable quantity of pus. This discharge of pus through the bronchi continued for about six weeks and was accompanied by a subsidence of the tumor, the liver dulness returning to its normal limits.—*Journal de Médecin et Chirurgie,* October, 1882.

A MODIFICATION of the Esmarch method of producing artificial bloodlessness is reported as having been in vogue for some time in Australia, where, indeed, it is supposed to be the genuine Esmarch method. A stout ring of small size, made of rubber tubing, is rolled up the limb from the extremity, driving the blood before it. When the desired height has been reached a pad of cloth is introduced under the ring, over the artery, to produce additional compression, and the ring remains *in situ* during the operation.—*Boston Medical and Surgical Journal.*

A TRACHEAL SPECULUM.—Dr. E. Braatz describes in the *Centralblatt für Chirurgie*, September 23d, 1882, an instrument to be used in place of the ordinary tube after tracheotomy. It consists of two narrow but strong blades, fastened, one on each side, to a ring, which may be attached to a shield in the ordinary manner. The blades are given the usual curve of a tracheotomy tube. The author was led to devise this instrument from the difficulty experienced in removing a large piece of false membrane through a canula. He claims for it that it offers less obstruction to the passage of false membrane, and permits of a thorough inspection of the trachea and under surface of the larynx. Through it, also, local applications may be made to any portion of the trachea.

LITHOLAPAXY IN ENGLAND. — A stone weighing over two ounces was removed by Reginald Harrison from a man 27 years of age, by the use of a smooth-blade lithotrite and Bigelow's aspirator. The patient recovered, and an examination of the bladder gave no further evidence of calculus.—*British Medical Journal*, October 7th.

HÆMORRHAGE. — By compressing the alæ between the thumb and finger, hæmorrhage from the nose can generally be arrested. If bleeding returns, apply a plug of cotton wet with a styptic lotion to the bleeding surface.—*Medical Herald.*

HOGS *vs.* BABIES.—The difference is that the government is moved to the outlay of enormous sums if the mortality is great among hogs, while nothing is said or done if babies die by the thousands, as in New York City.

LIGHT IN SCHOOLS. — Prof. C. J. Lundy, *Western Medical Reporter*, contends that the window space in schoolrooms should equal 30 to 50 per cent of the floor space. In some of the school-rooms of Detroit it scarcely equals 5 per cent, and gas light has been used at mid-day to enable the pupils to read. Such rooms furnish many patients to the oculists. Beauty (?) not utility seems to be the motto of architects in constructing schoolhouses and possibly other buildings, especially churches.

PERITONITIS CAUSED BY VAGINAL INJECTIONS.—Dr. Mascarel reports a case of peritonitis following the employment of the vaginal douche at a thermomineral bath. The tube employed was of large size, with a single opening at its extremity, and the fluid was injected with considerable force. Subsequent examination showed that the uterus was prolapsed and the os widely patent. The author insists upon the danger of medicated douches in women who have borne children, and urges in any case the employment of a tube with a bulbous extremity, perforated with a number of small holes.—*Journal de Médecine de Paris.*

TREATMENT OF RINGWORM OF THE SCALP.—Dr. Adler Smith recommends oleate of mercury with ung. petrolei (ten per cent) in chronic cases of tinea of the hairy scalp. This causes less irritation than the ordinary preparation, and children bear it well, although if the cases are under seven years of age it may be found necessary to dilute it further.—*British Medical Journal.*

THE *College and Clinical Record* publishes the following anecdote of Jenner: The celebrated Dr. Jenner, who introduced vaccination, was a man of genial wit, and the following lines addressed to a lady upon the recovery of her daughter, and sent with a pair of ducks, affords a specimen of his facetious vein :

"I've despatched, my dear madam, this scrap of a letter,
To say that Miss —— is very much better ;
A regular doctor no longer she lacks,
And therefore I've sent her a couple of quacks."

THE MOTHER OF THIRTY-TWO CHILDREN.—In a case lately heard at Aberdare, in which a young man named Hooker was ordered to contribute toward the maintenance of his father, it was stated that the defendant's mother had had thirty-two children. Defendant said that on three occasions she gave birth to twins, twice she had triplets, and afterward four children at a birth.

DRAINAGE.—Colonel Waring says: "Until quite recently I should have said that a soil-pipe jointed with calked lead was one of the complete elements of satisfactory house drainage. Recent experience in testing such pipe, by closing their outlets and filling them with water, has led to the conclusion that of all the lead-jointed iron soil-pipe now in existence in American houses, not one in a hundred would fail to leak under the test. I have recently had occasion to test the soil-pipes of a large house of the best class, where the greatest effort was made to secure tight work, where the joints were so exposed that there was no difficulty in caulking them thoroughly, and when there was every reason to suppose that every joint was absolutely tight. On closing the outlets and filling the pipe with water the whole system leaked like a sieve. The result puts an entirely new aspect on the whole question, and points clearly to a radical defect of the manner in which all of our soil-piping is done." A correct and common-sense system of house drainage construction is now offered to the Eastern public. Every man who feels the slightest concern about his house-drains should take the trouble to examine it Old buildings, as well as new ones, to be perfectly safe, should be fitted with the Durham System of screw joint drainage, constructed with wrought-iron steam-pipe, and special screw fittings. This system is absolutely and permanently perfect. It has been in use four years in the Northwestern States, and has been placed in nearly 2000 buildings of all classes, from the smallest to the largest. Examine the work personally, or send for an illustrated pamphlet. Durham House Drainage Company, 187 Broadway.

SMART-WEED or water-pepper has for a long time been claimed as the basis of an extensively advertised nostrum. It would appear that this drug possessed valuable properties. At one time it was regarded (Eberle's "Materia Medica and Therapeutics") of some value as an emmenagogue and locally as a counter-irritant. The *Medical News* claims that it is of benefit in anæmic metrorrhagia and menorrhagia. The dose of the fluid extract is five to thirty minims thrice daily. As it has a hot, pungent taste it is best given in a mixture of glycerine and wine. The eclectics have had good results from it in atonic uterine conditions.

HOMŒOPATHIC CURE FOR PILES.—Æsculus glabra (Ohio Buckeye) is regarded an excellent remedy for hemorrhoids, for "It is said that carrying the nut in the pocket or wearing it on the body will cure piles. Many physicians assert this to be a fact. Why not? May not the curative principle be absorbed in sufficient quantity?—*E. M. Hale's Materia Medica.*

DR. JENSEN'S PEPSINE AS A SOLVENT IN ALBUMINOUS OBSTRUCTION OF THE BLADDER. — Dr. Hollman (*Nederl. Weekbl.*, 18, p. 272) reports the case of an old man, aged eighty, suffering from retention of urine, in whom the introduction of a catheter failed to produce the desired result. It was found that the bladder contained coagulated albuminoid masses mixed with blood. A few hours after the injection of about sixteen grains of Dr. Jensen's pepsine, dissolved in water, a large amount of a dark, viscid, fetid fluid readily escaped by the catheter. —*London Medical Record.*

PITYRIASIS AND ITS PARASITE.—M. Vidal gives a *résumé* of his observations on the affection of the skin described by him under this name. The eruption begins by small rose-colored spots, scarcely raised above the level of the skin. Their surface is dry and slightly scaly. The spots are irregularly distributed, usually beginning on the trunk, but occasionally extending to the arms and thighs. They extend slowly. M. Vidal believes that he has discovered a special parasite in this affection, consisting of very minute spores, averaging a thousandth of a millimetre in diameter. The extreme smallness of the spores and their irregularity in size have induced M. Vidal to name the parasite *Microsporon anomæon* or *dispar.*—*Annales de Dermatologie et de Syphiligraphie*, vol. iii., No. 1; *Practitioner.*

THE MILK OF INTEMPERATE WOMEN.—A correspondent of the *Lancet* states that the milk of drunken women contains enough alcohol to burn.

TRANSPLANTATION OF MUSCLE.—Dr. Helferich, of Munich, after the removal of a large fibro-sarcoma from the biceps muscle of a woman aged 36, refilled the gap left vacant with a freshly-cut piece of muscle taken from a dog, fastening the same with six lower and thirty upper catgut ligatures. A cure followed the antiseptic treatment. The patient can now readily flex and extend the arm. An electrical examination instituted by Ziemssen did not show any abnormality, and it appears, therefore, that the transplanted muscle has retained its vital function.—*Berliner Klinische Wochenschrift*, No. 26, 1882.

WEIGHT OF THE BRAIN. — Bevan Lewis L.R.C.P., *Brain*, says Dr. Sharpey, after an elaborate analysis of brain-weights, given by Glendenning, Sims, Fredemann, and Reid, supplies the following:

Maximum	weight of	adult male	brain	65 oz.
Average	"	"	"	49½
Minimum	"	"	"	34
Maximum	"	"	female brain	56
Average	"	"	"	44
Minimum	"	"	"	31

Compatible with ordinary intelligence the lowest limit as regards weight is 900 grammes (Gratiold), 907 (Broca) for the female and 1040 for the male brain. The average specific gravity of the whole encephalon is 1036 as given by Bucknill.

HOW LONG SHOULD THE SUBJECTS OF CONTAGIOUS DISEASES BE ISOLATED?—The Academy of Medicine of Paris, after a careful study and report of a special commission, has given the following answer to the above inquiry. (*Gaz. Med. de Paris. Med. News*):

1. Pupils affected with chicken-pox, small-pox, scarlet fever, measles, mumps, or diphtheria, should be strictly isolated from their comrades.

2. For small-pox, scarlet fever, measles, and diphtheria, isolation should not be shorter than forty days;

for chicken-pox and mumps, twenty-five days is enough.

3. Isolation should last until after the patient has been bathed.

4. The clothing worn by the patient at the time he was taken sick, should be subjected to a temperature of 90° C. (194° Fahr.), and to sulphur vapor and then well scoured.

5. The bedding, curtains, and furniture of the sick-room should be thoroughly disinfected, washed, and aired.

6. The pupil of a school, after recovery from one of the above contagious diseases, should not be readmitted to the school unless furnished with the certificate of a physician that the above precautions have been observed.

SHINGLES. — Dr. Lamberti, in the *Revista Clinica di Bologna*, reports the cure of herpes zoster in one day, by painting the vesicles with liquid carbolic acid and covering with a thick layer of cotton wool. A saline purgative was given the next day.—*Canadian Journal of Medical Science.*

WOUNDS OF THE HEART.—A recent leading article in the *Lancet* shows the fallacy of many popular and even medical opinions respecting the absolute fatality of wounds of the heart. According to this article there is no case of absolutely instantaneous death from Cardiac Wounds. Wounds of the apex only kill within an hour after the wound has been inflicted. In one instance cited, a man lived twelve hours after the heart had been bisected by a sabre. Out of twenty-nine cases cited in the article in question, only two died within forty-eight hours after receiving the wound. The others lived from four to twenty-eight days; death resulting in most cases from unavoidable complications. Recovery may take place even when the wound is extensive, for a bullet has been found imbedded in the muscular wall six years after the receipt of the injury; the patient dying from a disease entirely disconnected with the cardiac wound.—*Chicago Medical Review.*

A PROLIFIC FAMILY. — The *New England Medical Monthly* records the following case:

Among the papers of the late Thomas Atwater, of New Haven, Conn., the following memoranda were recently found:

"Mrs. Mabie, No. 100 Twenty-ninth street, New York, of the firm of Topping & Co., has been married forty-eight months.

July 24th, 1858, had	1	child.
July 30th, 1859, "	2	children.
March 29th, 1860, "	2	"
March 4th, 1861, "	3	"
Feb. 13th, 1862, "	4	"
Total,	12	"

These children were all born within three years and seven months, and are all living and healthy. This is a copy from a memorandum given by the father, Mr. Mabie.

NOT WORTHY OF IMITATION.—To those American Physicians who have a passion for imitating and adopting European fashions and laws concerning professional matters, we commend the following paragraph contained in a letter to the *Maryland Medical Journal*, in regard to the Venereal Wards of the Vienna Hospital. To us it appears simply disgusting.

"It makes a strange impression on an American to go for the first time through the syphilis wards with the professor. Arranged in long rows on their backs in bed, with nothing covering them from their knees to their navels, lie the men ready for examination. Standing around, with various implements and dressings, are five or six active women awaiting orders from their lord and master, the professor. The men are not allowed to touch themselves, so with their hands under their heads they lie there with anxious faces awaiting the next development in the treatment. Truly, it is a comical sight this mixture of the sexes under the circumstances." —*Pacific Medical Journal.*

ROUGH ON RATS.—In a Toronto contemporary, Dr. Zimmerman draws attention to the highly dangerous nature of the compound sold under this name. One fatal case of poisoning has already occurred. It has been found, on analysis, to consist of 99 per cent of white arsenic. It is said to be "a convenient preparation by which any one can obtain a powerful poison."

FALLING FROM HEIGHTS. — With regard to the recent sad suicide of a girl by leaping from one of the towers of Notre Dame, Dr. Bronardeli's expressed view that asphyxiation in the rapid fall may have been the cause of death, has given rise to some correspondence in *La Nature.* M. Bontemps points out that the depth of fall having been about 66 meters, the velocity acquired in the time (less than 4 seconds) cannot have been so great as that sometimes attained on railways, *e. g.*, 33 meters per second on the line between Chalons and Paris, where the effect should be the same; yet we never hear of asphyxiation of engine drivers and stokers. He considers it desirable that the idea in question should be exploded, as unhappy persons may be led to choose suicide by fall from a height under the notion that they will die before reaching the ground. Again, M. Gossin mentions that a few years ago a man threw himself from the top of the Column of July, and fell on an awning which sheltered workmen at the pedestal; he suffered only a few light contusions. M. Remy says he has often seen an Englishman leap from a height of 31 meters (say 103 feet) into a deep river; and he was shown, in 1852, in the island of Oahu, by missionaries, a native who had fallen from a verified height of more than 300 meters (say 1000 feet). His fall was broken near the end by a growth of ferns and other plants, and he had only a few wounds. Asked as to his sensations in falling, he said he only felt dazzled.

TWO SUCCESSFUL CASES OF CHOLECYSTOTOMY.—MR. LAWSON TAIT reports the following cases. The first was that of a lady aged 28, with obstruction of the cystic duct from gall-stones. The abdomen was opened by a vertical incision over the tumor, which proved to be the distended gall-bladder. He emptied it by the aspirator, removing about a pint of thick glairy mucus. He then laid it open, and removed about eighty gall-stones of small size, the largest weighing fifteen grains. They were removed chiefly by the use of a *curette.*

He then stitched the aperture in the gall-bladder to the wound in the abdominal wall, carefully closing the peritoneum, and leaving a drainage-tube in the gall-bladder. The patient's recovery was uninterrupted; the highest temperature recorded was 100.4°, and the highest pulse record 84. The stitches were removed on the eighth day, the drainage-tube on the twentieth day, and in ten days more only a small sinus was left, from which some mucus still continues to be discharged. The patient has gained flesh since the operation, and has been entirely free from pain.

Neither at the operation nor in the after-treatment were any of the "antiseptic" methods of Prof. Lister employed.

The fistula in the gall-bladder continued to discharge clear mucus till on August 5th, when "something seemed to give way," as she said, and bile flowed freely. This shows that the occlusion of the duct had been overcome, and the complete functions of the organ may be re-established by the closure of the fistula.

The second case was that of A. B., aged 37, who was placed under his care some weeks ago by his colleague Dr. Hickinbotham. A tumor in the position of the gall-bladder could be occasionally discovered, and she suffered intermittently from severe attacks of colic. It was clearly a case of distended gall-bladder. On October 13th, he performed an operation precisely similar to that narrated above, and removed sixteen gall-stones, varying from seven grains to thirty-five in weight. He removed the drainage-tube on the third day. The stitches are now (October 24th) all removed, and the wound is almost healed.—*British Medical Journal,* November 18th, 1881.

DIPHTHERIA AND TYPHOID FEVER COMBINED. ILLNESS OF THE POSTMASTER-GENERAL OF ENGLAND.—Mr. Fawcett's serious illness presents several points of much interest to the medical profession. It is an instance of the rare co-existence of diphtheria and typhoid fever, which Dr. Murchison, in his large experience, appears to have met with only once, and which is only occasionally mentioned by other authors, chiefly foreign, who lay much stress on the gravity of the complication. Mr. Fawcett first felt ill on November 23d, with general *malaise,* feverishness, and sore throat. The throat was red and glistening, and, four days subsequently, true diphtheritic patches were found on the uvula and the left tonsil, afterward extending to the roof of mouth. There was no enlargement of the cervical glands. Under appropriate treatment the patches on the throat became loose, and separated on December 2d. Since that date the diphtheritic symptoms have not been so urgent, although the exudation reappeared for a few days, and even still the throat shows traces of the disease. It is worthy of note that there was also an erysipelatous redness on the face, and the presence of albuminuria was noted as early as the first week of the attack. The medical attendants first felt justified in announcing the presence of typhoid fever on December 2d, although its co-existence with the diphtheria had been suspected almost from the first. Since the 2d of December, several of the symptoms of typhoid fever—such as the state of the tongue, the rash on the skin, the enlargement of the spleen, the congestion of the lungs, and the abdominal symptoms—have been typical. Other important symptoms, characteristic of typhoid fever, have also been present. Thus, the temperature, which has varied from 102° to 103.8°, has not shown the usual temperature curve of typhoid fever. Instead of the evening rise and morning fall of temperature, typical of typhoid fever, the thermometer has, on several occasions, been stationary the whole twenty-four hours, and on others has risen in the morning and fallen in the evening. The pulse has never risen above 104, and the signs of nervous disturbance have been excessive, and out of proportion to the vascular excitement. Roughly speaking, then, for the first ten days, the diphtheria was the dominant disease, and subsequently the signs of typhoid fever have prevailed, although many of the usual signs of both diseases have been either modified or altogether absent. We confine ourselves to this short general outline of Mr. Fawcett's case, which is most instructive, quite apart from the personality of the distinguished patient. His condition must necessarily continue to cause anxiety for some time. Later he has become progressively better and is now out of danger.

SYMMETRICAL GANGRENE.—There are few diseases more calculated to excite the curiosity and wonder of the pathologist, than that one of which Dr. Southey exhibited so striking an example, at the last meeting of the Pathological Society. The obscurity in which the etiology of the disease is enwrapped, the severity of the symptoms, the impotence of any kind of treatment, and, often, the tender age of the patient, are circumstances which all tend to make a strong impression on the imagination. M. Reynaud was, we believe, the first to describe a form of gangrene which he called "symmetrical gangrene of the extremities," though it does not confine itself to the limbs, but attacks also the face and the trunk; it is characterized by the absence of any discoverable lesion in the viscera or in the arterial system, and by its symmetrical arrangement, homologous portions of the two halves of the body being attacked. The affected parts become quickly livid, apparently from arrest of the arterial blood supply and venous stasis; this is quickly followed by transudation from the vessels into the skin and connective tissue, and is accompanied by numbness and by sharp, darting, or stabbing pains. Cases are described where the process stops short of this stage, the affected limbs becoming temporarily pale and cold, and then recovering, after a few minutes or hours, to be again attacked, however, after a varying interval. Arguing from such cases as these, the phenomena of the disease have been attributed to spasm of the walls of the arterioles in the affected part. Though the symmetrical distribution of the gangrene suggests a central, probably nervous, origin, yet there is absolutely no evidence on the point which can be considered at all conclusive. Some connection has been supposed between this symmetrical gangrene and scarlet fever and measles, since it has sometimes occurred after one or other of these diseases. A suggestion which may, perhaps, bear fruit, was made by Dr. Wilks, when he pointed out that in several cases the patient had been coincidently affected with intermittent hæmatinuria, or hæmoglobinuria, as it is more properly called. We may remark, in passing, that Mr. Solly recorded, as long ago as 1839, a case in the *Transactions of the Medico-Chirurgical Society*, which seems to have been a chronic form of this disease, and that Dr. Henry, of Philadelphia, met with a case in a woman, aged forty-two. She was of dissolute habits, and died about a fortnight after the onset of the disease, which affected all four extremities.—*Brit. and For. Med. Chir. Rev.*

USE OF CONDOM IN GONORRHŒA.—Several years since, one of my patients, suffering with gonorrhœa, complained to me of the annoyance caused by the discharge. The idea of using a condom immediately suggested itself to me, and I advised its use. At his next visit he expressed himself as being very much pleased with the treatment. Since that time I have frequently prescribed the same thing for other patients, much to their satisfaction. My plan is to cover the glands with a thin layer of disinfectant cotton, and then draw the condom over it. By this means undue pressure is avoided, perfect cleanliness obtained, and the movements of the limbs are not interfered with, as would be the case with a cumbersome bandage.—Dr. C. H. Chalkley, in *Southern Clinic.*

REMARKABLE CASE OF MELANOSIS. —One of the most remarkable cases of melanosis on record was recently reported by Dr. Wm. H. Falls, of this city. The skin of the entire body gradually changed its color until the man, once of light complexion, became as black as a negro. Impaired vision, resulting in complete blindness, was the initial symptom, being due to the deposition of the melanotic masses in the choroid. The urine, black as ink, was highly albuminous. The subcutaneous nodules, widely distributed over the entire body, varied from the size of a millet seed to that of a cherry. With the exception of occasional convulsions, the patient's intellect remained clear to the end. Death resulted from paralysis following one of these convulsions. Melanotic masses were found in various parts of the brain and all the other viscera. These proved, on microscopic examination, to be melano-sarcomata. A detailed clinical history of this most interesting case, which lasted ten months, will, with illustrative lithographic engravings, and full *post-mortem* and microscopic accounts, be published in an early issue of the *Lancet and Clinic*, of this city.

A LARGE REFRIGERATOR. — The Quincy Market Cold Storage Company, of Boston, are said to have the largest refrigerating building in the world. It is of stone and brick, 160 by 80 feet in size, and 70 feet in height. The capacity is 800,000 cubic feet, the cost $200,000, and the ice chamber holds 600,000 tons of ice. It will be used for storing dressed beef and mutton. The Chicago refrigerating cars unload at the door.

SMALLPOX AND VACCINATION. — Look at the later statistics of the United States, obtained by our National Board of Health in 1881. Sixty-six cities and towns in this country yielded, during that year, in all, 4000 deaths from smallpox. As crowded cities always furnish much the largest number of cases of such diseases, it is not probable that more than a thousand deaths (representing from five to ten thousand cases) occurred outside of the reported cities. Suppose, then, five thousand deaths in more than fifty millions of people. This is one hundred deaths to each million of population. For fear, however, that we have under-estimated the deaths in rural localities, let us add to it, double or treble it—make it, say, *three hundred* to the million living. But, as Dr. Fothergill and Sir Gilbert Blane calculated, upon good evidence, the death-rate from smallpox in Great Britain for thirty years before vaccination was introduced by Jenner, was *three thousand* in every million of the population. Well may it be conceded that the mortality (besides the often hideous disfigurements, blindness, and deafness resulting) of smallpox has been lessened since the day of Jenner. Put, again, alongside of the above statements, the almost total absence of smallpox from such a country as Ireland, in some recent years (1866, 1867, 1868, 1869), and the official record in the report of the Massachusetts Board of Health, just issued, of the occurrence of but *two deaths* from smallpox in so large a city as Boston, in eight years—1873 to 1881.—*Hartshorne.*

PEN PICTURE OF PASTEUR.—M. Pasteur is described as a man of low stature and powerful frame — spare, angular, and weather-beaten. Of humble origin, the son of hard-working parents, he bears the indications of his race and hereditary bias in every lineament of his well-knit, muscular physique. He is a man of few words, abrupt but clear in his sentences, logical, and to the point. His style of speaking is what would be ordinarily called argumentative; his voice is clear and distinct, but unemotional, and his gestures are quick and impetuous, although wanting in the elegance that arises from early training. It is a very curious fact, but one that finds its correlative in the lives of Wallace, the celebrated British naturalist, and Prof. Crookes, the great master in physics, that, although his fame rests upon minute researches of the most material complexion, M. Pasteur is an ardent and steadfast believer in spiritualism. He takes no interest in the positivist doctrines of Comte, or in the evolution theories of Herbert Spencer, who, he thinks, overlook the central fact of the universe, infinity. Like M. Little, he holds that without a spiritual link the human family would fall to pieces and nations degenerate into barbaric hordes. In his own neighborhood, M. Pasteur is a man of political and social weight, and in his own house he is the soul of genial and pleasant hospitality.—*Medical and Surgical Reporter.*

THE MUD-BATHS OF EUROPE represent a stage of therapeutics which America has not yet reached. A correspondent of the *Cincinnati Lancet and Clinic* gives an interesting description of them: "Here in Austria they excavate a marsh where decaying vegetable mould and water is in abundance, cart it to the bath-houses, grind it in a mill and pass it into a large tank, where it is mixed with water and heated by steam. From the tank it is drawn off into portable bath-tubs, where it is again mixed, more water added, and the temperature brought to the desired grade. Then it is wheeled into the bath-room and the unfortunate bather plunges into a black, bad-smelling mixture, where he remains from twenty minutes to half an hour, when he steps into a second tub, full of pure water, to cleanse himself. The moor is too precious to be wasted, so after being used it is deposited in a great heap, where it is said to remain ten years before it will be fit for use a second time. These heaps remind one in more ways than one of those which the dairy farmer accumulates behind his cow stable. The moor-bath is popularly believed to be very beneficial in all cases—a veritable cure-all. The physicians questioned on the subject were unwilling to commit themselves as to its indications and effects, except in the case of hypochondriacs, with one exception, and he said where a poultice for the whole body was necessary he knew of no more convenient method of applying it."

HYGIENE IN HOUSE WALLS.—Mr. T. R. Baker, in a paper read before the American association for advancement of science, "on the permeability of the linings of house walls to air," assumed that ordinary wall paper made the walls nearly air-tight. Hygienically considered, the walls of a house should be porous, like our clothing, so that our bodies can have through them, as also through our clothing, free intercourse with the external air. Compact wall linings, even if their minute pores are open, greatly interfere with this intercourse; but if their pores are closed with water, as when the walls are damp, it is almost completely cut off; and such linings increase the dampness of walls by preventing their drying in wet weather. The prolonged dampness also prolongs other evils produced by damp walls; therefore wall-papers and their substitutes should be condemned, and the old-fashioned whitewashed walls commended.—*Popular Science Monthly*, November 1882.

A GROWING YOUTH.—Jean Condoist has been brought to Paris as a medical curiosity from the Haute Caône. According to a medical contributor to a Parisian contemporary, this youth, aged nineteen, took a start on the 17th of May, 1881, being then six feet, three inches high, and found one morning that he had grown an inch. Every week since then has he registered himself, and on the 14th of September this human beanstalk had gained nearly five inches; he grew five inches more before the 20th of January 1882, and seven more before March 15th, and he now stands 7 feet and 10 inches. All this has been accompanied by great pains in the back, and he stoops considerably; but since last June, it is his legs only that have grown, and his feet are already twenty-four inches long.—*London Pall Mall Gazctte.*

THE DISCOVERY OF TRICHINA.—With regard to the discovery of the *Trichina spiralis*, it is stated in the autobiography of Mr. Gulliver (the manuscript of which is in the possession of Mr. T. M. Stone, formerly of the College of Surgeons) that "Dr. Arthur Farre, son of the excellent pathologist, was yet at St. Bartholomew's near the period of my arrival there, and he was a diligent and good anatomist, who made the best early observations on the *Trichina spiralis*, the muscle-worm now become the terror of pork-eaters. I think it was at Guy's that Mr. John Hilton first saw this worm, and specimens of it being soon afterward found at St. Bartholomew's, were understandingly investigated by Mr. James Paget, at that time a pupil, and Professor Owen. Farre discovered the intestines and genitals of the creature, parts which Owen failed to find. So to Farre we owe the original and true description of this entozoon, and its claim to a higher organization than had been allowed for it by Professor Owen." The late Mr. Wormald and Professor Quekett always gave the credit of the discovery to Paget.—*British Medical Journal.*

NUTRITIVE VALUE OF SOUPS AND BROTHS.—The distinguished German Professor Virchow has been accused of being the chief opponent of soup. He says (*Scientific American*) that this is not true, for he had merely said that meat broths are neither nutritious nor "substantial." That if all the meat which one uses should be boiled and soup made of it, the meat would become for the greater part indigestible, and the soup would not be a substitute for it. Ordinary meat broth or bouillon in its pure form can only be recognized as a condiment. By the addition of eggs, flour, fat, and other things it may acquire a certain nourishing and heating value. It is, primarily, only a very dilute aqueous solution of substances that are in part of low value as heat producers, such as gelatin, and in part of the stimulating aromatic parts of the meat. Taken warm, it is of nearly the same value as coffee or tea, but is inferior to wine, schnapps, or beer; it only stimulates the nerves. It has one advantage over every other condiment, namely, it contains no poisonous substance, it is incomparably milder, hence much better adapted to feeble persons; and finally, it can be very conveniently combined with substances that are actually nutritious, and imparts to them an agreeable and substantial taste.—*Chic. Med. Review*, October 1st.

THE FIRST TELEPHONE.—At a recent meeting of the London Physical Society, Prof. Thomson exhibited an early Reis's telephone made by Phillip Reis, in 1861, at Frankfort, and designed to transmit speech. It was modelled on the human ear, one form of transmitter being a rudely carved wooden ear with a tympan, having a platinum wire behind hard pressed against a platinum-tipped adjustable spring. Prof. Thomson showed by various proofs that words were actually sent by that and similar apparatus.

PHYSIOLOGY IN THE STUDIO.—The French portrait painter, Paguest, was excessively irritable whenever his sitter showed signs of weariness. Paguest had at one time studied medicine, and as a result of this the following story is told: A sitter growing drowsy, leaned back in his chair half asleep. Paguest at once aroused him. "Why," said the victim, "you are at work on my knee!" "Don't you know," answered the painter, "that during sleep the blood does not flow as briskly in the arteries as when one is awake, and that a change in the shape of the knee-pan is the result?"

MEDICAL NEWS.

DIPHTHERIA IN BOSTON.—Owing to the prevalence of this and other diseases, public funerals have been forbidden by the Board of Health.

SMALL-POX and scarlet fever continue to prevail in Cincinnati, and bid fair to assume epidemic proportions.

THE VETERINARY COLLEGE OF THE UNIVERSITY OF PENNSYLVANIA. — A subscription of $10,000 has been received by the University of Pennsylvania, for the establishment of a veterinary college. Several physicians of reputation and ability are now in Europe, pursuing special courses of study to qualify them to fill professorial chairs in this new college.

DIPHTHERIA EPIDEMIC AT PHILADELPHIA.—Notwithstanding the stringent rules adopted by the sanitary authorities to prevent the spread of diphtheria, the disease is making alarming progress in this city and the suburbs. The Health Officer reported to the Board of Health recently that 155 new cases had been discovered during the week ending at noon that day. The deaths aggregate nearly one third of the total number of cases.

THE editors of the *Chicago Medical Journal and Examiner* announce that they will shortly publish an article by Dr. H. D. Schmidt, of New Orleans, which article will contain very strong evidence, if not actual proof, that the *bacillus tuberculosis* is not an organized body, but a fat crystal.

SIR THOMAS WATSON.—The death is announced (Dec. 13th) of Sir Thomas Watson, M.D., F.R.S., one of the physicians-in-ordinary to Queen Victoria. The Baronet was the eldest son of Joseph Watson, of Thorpe, Essex, England. He was born at Kentisbeare, Devonshire, in 1792. His education was received at St. John's College Cambridge, he being graduated as tenth wrangler, with the degree of B.A., in 1815. He was given the degree of M.A. in 1818 and M.D. in 1825. He was elected a Fellow of the College of Physicians in 1826, and since 1862 has been its President. From 1827 to 1840 he was one of the physicians to the Middlesex Hospital, and for some time was Professor of the Practice of Physic in King's College, London. He was physician-extraordinary to the Queen several years and was appointed a physician-in-ordinary June 12th, 1870. He was created a Baronet in 1866. His literary work is mainly comprised in the "Lectures on the Principles and Practice of Physic, delivered at King's College, London." The greatest medical work of the century.

DR. EDWARD C. SEGUIN.—Several of the medical societies of this city have very appropriately passed resolutions expressing sympathy with Dr. Seguin in his recent affliction. He has sailed for Europe with the intention of remaining abroad for a considerable period.

REFILLING OF PRESCRIPTIONS.—In Wisconsin, any druggist, apothecary, or vendor of medicine is liable to a fine of ten dollars and costs every time he is convicted of refilling a prescription marked "No Duplicate."

DR. HUGHLINGS JACKSON, in a recent address, says very truly that too much specialism in teaching tends to produce prigs rather than practitioners.

DR. DESPRES has recently reported two cases of the communication of syphilis by the use of razors.—*Chicago Medical Review.*

DR. FLINT'S LECTURES BEFORE THE PHILADELPHIA COUNTY MEDICAL SOCIETY.—Dr Austin Flint, of New York, will deliver in the hall of the College of Physicians a course of three lectures on "The Physical Exploration of the Lungs by Auscultation and Percussion" before the Philadelphia County Medical Society, on the evenings of Saturday, November 25th, December 16th, and January 13th.

The subjects of the lectures are:

Lecture I. The True Mode of Study and its Requirements as Regards Auscultation and Percussion. The Signs obtained by Percussion.

Lecture II. Auscultation; and the Respiratory Murmur, with its Abnormal Modifications.

Lecture III. The Râles and the Vocal Signs.

The profession are invited to attend the lectures.

DR. J. FORSYTH MEIGS died in Philadelphia early in December, of pneumonia. He was an eminent physician, and was born in 1820. He graduated from the University of Pennsylvania in 1838, and for a number of years was a physician at the hospital. He was particularly skilful in diseases peculiar to children, and wrote a medical work entitled "A Practical Treatise on the Diseases of Children." He was a Physician at the Pennsylvania Hospital until about a year ago, when he resigned, and his son, Dr. Albert Meigs, was appointed in his place. Dr. Meigs was a member of the American Philosophical Society, Academy of Natural Sciences, Pathological Society, and Obstetrical Society. He was a consulting physician at the Children's Hospital and a Fellow of the College of Physicians of Philadelphia.

A STRINGENT EXAMINATION OF STUDENTS.—Out of one hundred and fifteen medical students who went up for the first professional examination at Glasgow University, fifty-four were "plucked." Was this fact due to bad material on the benches or at the desk?

THE *Medical Times* asserts editorially that at the Philadelphia Hospital the public clinic room where ovariotomy and other most delicate operations are performed is situated directly between a ward devoted to erysipelas and a mortuary.

Dr. J. BURDON SANDERSON, F.R.S., has been elected to the Waynflete Professorship of Physiology at Oxford.

DR. A. E. SANSOM has been elected Lecturer on Medical Jurisprudence and Public Health at the London Hospital Medical College. Dr. C. Meymott Tidy will lecture on Toxicology in the place of Dr. Rodgers, who resigned last summer.

SURGEON-GENERAL OF NEW YORK. —Governor-elect Cleveland, of New York, has just appointed Joseph D. Bryant, M.D., Professor of Anatomy in Bellevue Hospital Medical College, Surgeon-General of New York State.

THE QUARTERLY COMPENDIUM OF MEDICAL SCIENCE. — After January 1st, 1883, the *Compendium of Medical Science*, formerly published half yearly, will be commenced as a *quarterly*, to be issued on the 1st of January, April, July, and October.

THE PRIX VOLTA. — The French Government has decreed the creation of a prize of fifty thousand francs, which is to be called the Prix Volta, and awarded in 1887. The prize will be given to the author of the discovery which shall increase the facility of the application of electricity in one of the following departments (*qui rendra l'électricité propre à intervenir avec économie dans l'une des applications suivantes*): (1) as a source of heat, of light, of chemical action, of mechanical power, as a means of transmission of messages; and (2) in the treatment of disease. The second article of the decree states that *savants* of all nations may compete. This probably means that the prize is open to the whole world, although, as far as the wording is concerned, it might be refused to a practical discoverer on the ground that he was not a *savant*. The third article fixes June 30th, 1887, as the last day for putting in claims. A Commission nominated by the Minister of Public Instruction will examine into the merits of the discoveries specified by the competitors, and decide whether they fulfil the necessary conditions. The report of this Commission will be published in the *Journal Officiel*.—*Ex.*

THE ANNALS OF ANATOMY AND SURGERY. — Few American medical journals have reflected more credit upon the profession than the *Annals of Anatomy and Surgery*. We are glad to learn, therefore, of its continued prosperity, and that during the coming year special arrangements have been made to add to the value of its issues.

WILLIAM WOOD & CO. announce that after the first of January the *American Journal of Obstetrics and Diseases of Children* will be issued monthly instead of quarterly. The same style of publication will be retained and the price will be $6 per year, or, if paid in advance, $5.

CREDIT TO WHOM CREDIT IS DUE. —Philip Doddridge (1702–1751), spoke of nerve-stretching, and recommended it as a religious stimulant in his "Zeal and Vigor in the Christian Race."

> "Awake, my soul: STRETCH EVERY NERVE
> And press with vigor on."

THE Trustees of Jefferson Medical College, at a meeting held November 22d, elected Dr. J. Solis Cohen Honorary Professor of Laryngology. They also filled the positions on the surgical staff rendered vacant by the making of Drs. John H. Brinton and S. W. Gross Professors of Surgery, by electing Dr. Joseph Hearn and Oscar H. Allis visiting surgeons to the Hospital.

WE are sorry to announce the ending of *Fraser's Magazine*, not so much on its own account, for it was rather dull of late years, as on account of the associations which were connected with it when it was fresh and young.

THE INSANE COLONY AT GHEEL.—An American physician, visiting this colony, reports unfavorably of it. "Gheel," he says, "may do for Belgium, but not for us. Even in Belgium things are changing greatly from year to year; and from statements of inhabitants of Gheel it is only a question of time when this system will have to be given up. In the country the lunatics are miserably taken care of; and in town, where men and women go about unaccompanied, results easily anticipated occur. In one case the family used the patient's blanket in a winter night; in another the patient was abused; a third had a female patient who had become pregnant; a fourth became vacant for the same reason. I should judge that there is more trouble on this score than is admitted. The fact that there are now 200 vacant beds in the colony corroborates the statement that this system will have to be abandoned. Heretofore I had entertained some poetical ideas concerning Gheel; the prose that I now saw was sufficient to dispel them. The guide told me that the majority of visitors went no further than the town. Having myself seen more of the country than of the town, I may have seen less of the good features and more of the bad than is usually the case.—*Philadelphia Medical Times.*

THE Garfield Board of Audit have allowed the following claims for professional services: Dr. D. W. Bliss, $6500; Dr. D. H. Agnew, $5000; Dr. Frank H. Hamilton, $5000; Dr. Robert Reyburn, $4000; Dr. Silas A. Boynton, $4000; Dr. Susan A. Edson, $3000; total; $27,500. This is $8000 less than the amount especially appropriated for physicians and medical attendance.

THE LANCET'S LIBEL SUIT.—The Corporation of Brighton has abandoned the action for libel which they had commenced against the *Lancet.*

THE *New York Medical Journal* will be converted into a weekly in January next.

"THE POLYCLINIC" and the "Post Graduate Medical College" in this city are both doing well.

THE ANNALS OF ANATOMY AND SURGERY.—The December issue of this journal closes its third year of existence. Though young, it is a remarkably vigorous production. Devoted to the subjects of anatomy and surgery, its advent filled a long existing void in medical journalism, and we trust it may have a long and prosperous future.

A HEAVY BRAIN.—Dr. Halderman, of Columbus, publishes, in the *Cincinnati Lancet and Clinic* of July 22d, 1882, the following record of a man possessed of an abnormally heavy brain: "The subject was a mulatto man, named Washington Napper, aged 45, who died recently in St. Francis Hospital (Cincinnati), of blood-poisoning, induced by abscess of the thigh. He was a native of West Tennessee, and was a slave till 1862, when he deserted his master, and afterward came north with the Forty-Sixth Ohio Infantry to this place, which he made his home until the time of his death. His brain was found to weigh sixty-one ounces. He was about six feet in height, and of rather ungainly build; had long ape-like extremities, massive head, and coarse physiognomy, thick lips, protuberant lower jaw, high cheekbones, but lofty and expanded frontals. He was never regarded as of much intellectual brightness, but is spoken of as having been of rather reserved and thoughtful disposition; and, later in life, to have become of quite a moral and religious turn of mind. He was illiterate, but managed, by industry as a common laborer, and by close economy, to accumulate some little property, which, on his deathbed, he bequeathed to his church and to the Sisters of the Poor, in return for their care of him during his fatal illness. It will be observed that but two brains, whose weights are credited by scientists, are on record heavier than this, namely, those of Cuvier and Abercrombie: the former, as is well known, weighing 64.33 ounces, and the latter 63 ounces. So that if, as is held by some, intellectual greatness lies in the quantity of brain-substance alone, who knows but with this man passed away another whose

"Hands the rod of empire might have swayed,
Or waked to ecstasy the living lyre?"

—*Lancet.*

NOTE.—Brother, go and study elementary histology.—E. S. G.

THE BLIND AS STENOGRAPHERS.—The blind are now taught stenography. This opens up an entirely new and most remunerative field for this afflicted class.

DRUG FARMS.—It is suggested that the cultivation of drug farms in this country would give most lucrative employments to thousands who are idle and hopeless of doing anything to support themselves.

DR. J. C. MACKENZIE, 432 West Twenty-second Street, New York, is now giving excellent laboratory instruction in urinary analysis, chemical and microscopical. Those who desire to receive thorough teaching of the best character will do well to apply to him.

DR. S. WEIR MITCHELL has given to the public a new work, "The Hill of Stones, and other Poems." He is fast becoming the American Holland.

VIRCHOW, so seriously ill with nephritis, is better.

THE ELECTRIC LIGHT is being introduced into dissecting-rooms.

A WORTHY EXAMPLE.—A beautiful memorial of his daughter, who died last summer, has been made by Senator Edmunds, by endowing in her name a room in the Mary Fletcher Hospital, Burlington, Vermont. Over the door, outside, a handsome tablet bears the name, "Julia M. Edmunds," and the date of the endowment. Within, the room is luxuriously furnished, every article in it being marked with the initials "J. M. E." On the wall hangs a superb engraving of Millais' painting "L'Angelus." The endowment, $5000, provides for the support and care of one free patient, and its first beneficiary has just been received.

Practical charity is not so common in this country but that so beautiful an example of it should be given extensive notoriety. No one could erect a more lasting or pleasing monument to the memory of a dear departed one than by following this worthy example. Our hospitals are none too rich, and such munificence would enable them to dispense even more charity than they do at present.—*Medical and Surgical Reporter.*

PHILADELPHIA, November 21, 1882.

EDITORS MARYLAND MEDICAL JOURNAL.

GENTLEMEN: Will you kindly correct an error which crept into "Our New York Letter," issued in the last number of your valuable journal, and thus save me from becoming an idle and useless man during the remainder of my life? The writer of the letter is not responsible for the error, for he only repeats what the New York reporters said, without any authority, in their accounts of Dr. Sims's reception. I have not retired from practice, and have no such intention so long as I have eyes to see, hands to work, and a brain to guide my actions. I cannot consent to lock up my experience, or to consign myself to ennui and obliviousness. I am determined to work to the end, whenever that may come.

I thank you very cordially for your kind notice of my book, and your beautiful remarks upon the life and character of our great countryman, J. Marion Sims, who has done so much to ennoble our profession and to alleviate human suffering.

I am, very truly your friend,

S. D. GROSS.

BY an order adopted November 22d, the Boston Board of Health forbade public funerals over the remains of persons who have died of small-pox, scarlet fever, diphtheria, or typhus fever, unless the written permission of the board is first obtained. Bodies of such persons must be placed in tight coffins and may not be exposed to view.

PROF. VIRCHOW, of Berlin, owns nearly 6000 human skulls of all ages and nationalities.

THE jubilee of the election of M. J. B. Dumas, the celebrated chemist, into the Paris Academy of Sciences, was celebrated on the 6th inst. He has been secretary of that body since 1868, and his colleagues marked the occasion by presenting him with a bronze medal bearing his effigy. M. Dumas, who is in his eighty-third year, made a touching reply, and expressed his delight at seeing his pupils advance beyond him in scientific researches.

THE Lumleian Lectures for 1883 at the Royal College of Physicians will be delivered by Dr. A. B. Garrod, on "Uric Acid: its Relation to Renal Calculi and Gravel." The Croonian will be given by Dr. J. E. Pollock, the subject being "Modern Theories and Treatment of Phthisis;" and the Gulstonian, on the "Nature, Causes, and Treatment of Sterility in Woman," by Dr. Matthews Duncan.

THE University of Zurich will, at the end of the current winter term, celebrate the fiftieth anniversary of its foundation.

RESIGNATIONS.—Dr. J. M. Holloway, Professor of Surgery, and Dr. J. B. Marvin, Professor of Chemistry, in the Hospital College of Medicine, in Louisville, have resigned their respective chairs. The resignations have been accepted, and these gentlemen have withdrawn from the college, having been connected with it since its foundation. Their successors have not yet been announced. It is understood that the faculty will be reorganized, and the annual sessions held hereafter during the spring and summer months.

SEVERAL deaths from Chloroform are reported.

PROF. VIRCHOW'S HEALTH.—Prof. Virchow's health is slowly but steadily improving; he is now driven every day in a closed carriage to the Pathological Institute, but avoids all work which requires him to be out of doors.

THE MEDICAL COLLEGE OF VIRGINIA, says the *Southern Clinic*, offers to educate forty young men free of charge, and to do the charity practice of Richmond city free of charge, and to attend to the midwifery practice of the city also free of charge. The editor of the *Clinic* offers in the way of competition, to pay fifty cents to each patient who will call upon him.

VEGETABLE INOCULATION. — A French chemist claims to have discovered a method of overcoming the danger threatening vineyards from the ravages of the phylloxera. His process is to inocculate the vines with the phenol poison. The phylloxera do not attack plants thus treated, and are extirpated for want of food. The vines are in no way injured by the inoculation process.

COLOR-BLINDNESS IN SEAMEN.—A systematic examination is now carried on, as to the power of discerning colors, in the United States Navy; and, according to the report of the department for the last year, it appears that, during the past year, the operations of the service have been extended to a number of new ports. There were 2090 pilots and 273 seamen examined for color-blindness. Sixty-three of the former (about three per cent) and four of the latter were found color-blind.

A LEGALIZED EDUCATIONAL FRAUD.—Charles J. Eastman, Rufus K. Noyes, and W. D. Corken, corporators and officers of the Bellevue Medical College, recently arrested on the charge of issuing bogus diplomas, were examined before Commissioner Hallett on December 15th, at Boston, on charges of using the mails for fraudulent purposes. Evidence was offered by the government, and was not contradicted, to the effect that the college had issued degrees and diplomas to individuals grossly ignorant of the theory and practise of medicine, and after a farcical course of instruction covering a few weeks or less. Defendants claimed simply that they were empowered to do all that was alleged, by the laws of Massachusetts. It appeared that the institution was legally incorporated, and that, according to the corporation laws and its charter, it enjoys all the privileges of other medical colleges. These facts were admitted by the government attorney. Commissioner Hallett said if the Faculty chose to issue degrees to incompetent persons, the laws of Massachusetts do not prevent them. The prisoners were therefore discharged.

NEPHRECTOMY.—The operation of nephrectomy, so popular of late in New York, has not been resorted to as enthusiastically as it was before the recent removal of the kidney from a patient in one of the city hospitals. No urine was passed after the operation, and the woman died in two days. It was found that there had been but one kidney—that removed by the surgeon.—*Phil. News.*

THE DEATH OF WILLIAM PIRRIE, M.D., C.M., LL.D., F.R.S.E., is announced. Dr. Pirrie was the leading surgeon in the north of Scotland. His chief literary works were his "Surgery," which has run through three editions in England, and five editions in America; and his treatise on "Acupressure," published in 1867.

THE NEUROLOGICAL AND MEDICO-LEGAL SOCIETIES.—Two rival nominees for the Presidency, Dr. W. A. Hammond, and Mr. Claude Bell, have had an exciting contest. Mr. Bell, however, defeated his opponent.

POST-GRADUATE MEDICAL SCHOOL.—Dr. M. A. Pallen has resigned to go to London, his place to be filled by Dr. B. F. Dawson, formerly editor of the *American Journal of Obstetrics.* Dr. H. G. Piffard has also withdrawn from the faculty.

DR. CORVISART.—A cable despatch from Paris says Dr. R. F. E. Lucien Corvisart, the eminent French physician, is dead. It is stated that he never recovered from the shock he received at the announcement of the tragic death of the Prince Imperial in Zululand. He was the author of many learned works on medicine, including treatises on dyspepsia and consumption.

THE UNITED STATES DISPENSATORY—Fifteenth Edition.—Messrs. J. P. Lippincott & Co. announce the appearance in January of this well-known work. The revision has largely occupied the time for the past three years of Dr. H. C. Wood, Prof. J. P. Remington, and Prof. Samuel P. Sattler, and will be thorough and complete.

THE late Dr. Peacock, so long connected as physician and lecturer with St. Thomas's Hospital, has left a bequest sufficient to establish a scholarship in the Medical School of the value of 40 guineas. The scholarship will be tenable for two years, and will bear the title of "The Peacock Scholarship."

THE DANGERS OF VEGETARIAN DIET.—The wife of the celebrated Dr. Tanner has lately taken up her abode in France, having obtained a divorce from her eccentric husband under the following circumstances: Dr. Tanner, it appears, is peculiarly addicted to extraordinary fancies; and, some time since, he thought that he had found out that the human character becomes modified according to the food taken by the individual, and especially in relation to the vegetables consumed. Carrots, he avers, make people fidgety and sly; turnips produce extreme amiability; while a prolonged diet of French beans induces great irritability of temper. The carrying out of this theory has brought great trouble into Dr. Tanner's home. He made a heavy wager on the question with some friends, and experimented on Mrs. Tanner with French beans, giving her to eat about three pounds of this vegetable daily. It is not altogether to be wondered at if, after such a regimen, Mrs. Tanner became rather more irritable than was, perhaps, contemplated, and threw a jug at Dr. Tanner's head. The doctor, however, gained his bet; and, more thoroughly convinced than ever of the truth of his theory, put his wife on the turnip diet, so as to make her as amiable as she was before the French bean regimen. This time, however, the result was not so strictly in accordance with the theory. Mrs. Tanner objected to be any longer a subject for these vegetarian experiments; sued for a divorce, and, what is more singular, obtained it.—*British Medical Journal.*

EDITORIAL.

TYPHOID AND TYPHO-MALARIAL FEVER.—Gallons of ink and most precious time have been wasted by hundreds in endeavoring to define the differences between these so-called fevers; that is, if the latter disease can be said to be an entity, and to have any existence.

The most recent case has been the prosecution of a poor newspaper editor, John H. Cook, of the Red Bank (N. J.,) *Register*, for saying that typhoid prevailed at Red Bank, N. J., when the "authorities" (a stupid lot of aldermen) claimed that it was *only* typho-malarial fever!!

Aldermen are proverbially stupid and pigheaded; and New Jersey aldermen are as bad as the worst, but the prize should be certainly given to the aldermen of Red Bank, N. J.—What do they know of the matter?

The fact is, Cook tried to do his duty, and the medical profession and all sensible people award him the highest praise for his action.

Herbert Spencer, just before he returned home, was given a public reception and dinner in this city. In his speech, he censured Americans for working too much, and resting and sleeping too little—that was about the whole speech; and yet the daily and even the medical press have gone into paroxysms of delight and foolish adulation over the address. The same views have been far better and more strongly presented by dozens of physicians. It is the advice that almost every practitioner gives at least once a day, and has done so for years.

The whole fact of the matter is, Mr. Spencer is suffering from insomnia, from overwork; he is penitent, remorseful, thinks of little else, and speaks of little else; but adulation of him because he has said what others have so often and better said, is folly indeed.

The Archives of Dermatology, by L. Duncan Bulkley, M. D., is discontinued with the October issue. The reasons for this are the increasing professional labors of the author, in his private and public practice, and the recent publication of the "Journal of Cutaneous and Venereal Diseases," by Drs. H. G. Piffard and P. A. Morrow. Dr. Duncan's Quarterly was published with marked ability, and there is no doubt but that the monthly issued by Drs. Piffard and Morrow will be in no respect inferior to it. This Journal offers its best wishes for the success of the new-comer, and a regretful farewell to the familiar, but now retired friend.

Impotency.—In the "American Medical Digest," Dr. Richardson makes the statement that "celerina" is the most efficient nerve tonic in the materia medica. *To make the matter sure he adds ten grains of bromide* to each teaspoonful dose. This precaution appears to be a very wise one indeed. He states that the patient after commencing the use of this formula rarely if ever has an emission. This clearly proves that "celerina" is a good nerve tonic, and—that it will stop the emission if *bromide be added to it.—Chicago Med. Review.*

Note.—The *editorial* departments of many otherwise reputable journals are constantly soiled by the "*paid for*" paragraphs of this *stuff*, and to believe one tenth of what is said and certified to in regard to it, one must have lost both his judgment and his common sense. In the instance given above, a man, *by the use of a strong sedative*, is relieved of nocturnal erections and emissions, and the result is attributed to the use *of a nerve tonic!!* And this is a very fair sample of the nonsense contained in these "testimonials," given, as a rule, by very incompetent, very obscure, and very unreliable, if not stupid, practitioners.—E. S. G.

"**The Chill Smasher,**" of Dr. J. Lawson Felder, Jr., of Leesburg, Texas, as given in this Journal very recently, was printed incorrectly. The smasher is as follows:

℞ Sul. qui, 1 drachm; ext. nux vomica, 10 grains; ammonia cit. iron (sol.), 1 drachm; acid sul. qs. or 15 drops; water, 10 ounces; whiskey, 10 ounces; M. Dose 1-2 ounce thrice daily.

The Doctor recommends it *con amore* and hopes it will receive a fair trial.

Ex-Senator Hendricks and his Doctors.—The Dayton Journal says there is a quiet laugh at the expense of doctors in Indianapolis and Louisville, Ky. Ex-Senator Hendricks was recently reported critically ill of erysipelas, with dangerous symptoms, certain, the *great* doctors of Indianapolis and Louisville said, to carry him to a speedy death. The Senator prepared for his fate calmly, and resignedly waited for the grim messenger. But he did not proceed to die. The day to which the scientific doctors limited his life, a blunt old Democratic friend, who was a country practitioner, came to pay this distinguished man a farewell visit. He looked at the erysipelas of the dying statesman, and suddenly said, with an aggressive grunt: "Nothing but a bile, so help me G—!" The next day the statesman was at the polls voting the Democratic ticket. The distinguished scientific physicians are very quiet on the subject.

Brave Patience.—Carlyle had not learned what one may, without irreverence style the Religion of Patience. By patience is meant not the mere passive virtue of endurance, which indeed is not infrequently no virtue, but rather the ability, when one has done his best, under all possible circumstances, to rest undespairingly, and to wait trustfully for the result.

Body-Snatching.—One of the most remarkable examples of the injustice of the general public to physicians is to be found in the treatment of them and of their assistants, if arrested in the direct procurement of anatomical material.

If the surgeon is not a master of anatomy, he is held not only morally, but legally responsible; he is punished. If he does not learn anatomy, he is punished. If he seeks to learn anatomy, by studying it, as it can only be studied, on the dead body, he is punished. And yet the Public seems to believe that all of this is fair and just.

More than this, that great power, the secular press, which ought to know and to do better, is, on all occasions, when the matter is discussed, not only unjust, but stupid and silly. Even guilty of trying to make the capital that a demagogue only seeks from the ignorant masses, by denouncing physicians for obtaining the anatomical information which honesty in their calling, and which the Public and the law require them to possess.

If this denunciation of the press, this punishment of the courts, and this mob-like violence of the people were manifested when physicians or their agents or assistants invaded the graves of those previously known to a community, and valued by it, no one could object or be surprised. But such graves are not molested; it is the graves of the pauper, the criminal, the vile, and the unknown which are opened; and opened that the first good ever done by these bodies may come by their dissection; in that "though dead" they "may yet speak," for the good and safety of a community; for the physical salvation of the injured and the afflicted.

But, however despicable and unknown and uncared-for, and neglected may be a pauper in life, he has only to die and to have his body really utilized for mankind, to arouse the foolish ire, the universal excitement, and the abuses of the ignorant and the foolish; yea, even more, to secure protection and care which were denied to him while alive. And this folly is not only manifested by the mob, but also by the law, by enlightened society, and even by the daily press.

Can nothing be done? Is the medical profession helpless, and to remain so? or shall it make a proper use of those powers which the God of nature has placed in its power?

No one can doubt the fact that the Public is only unjust from the want of information, and that the courts are only unjust, because they must vindicate the law. Cannot information be given to the Public, and cannot the law be so changed as to represent right and reason, and not folly and fanaticism? No one doubts but that this can be done.

It is all very well for medical societies to discuss, in their meetings, questions of pathology and therapeutics, and questions belonging to all of the departments of medical science, and this should be done; but every such Body should discuss also and act vigorously upon all questions which affect the relations of physicians to the Public. Proper papers from proper committees in State and county societies can like magic transform opinion and modify law. Shall it not be done, and shall it not at once be done in regard to the great question affecting physicians and the Public in their relations in cases of surgical injury? By all means, public opinion can be moulded and the unjust law made right. This is noble work, and it cannot be done too soon or too generally.

In Philadelphia, and in Richmond, Va., physicians and students are in jail because of their trying to learn that anatomy, which the Public declares they must know, and which the law punishes them for not accurately comprehending.

Here is work for every medical society.

Cough Lozenges.—*Puck* says: "One of the saddest moments in life is when a man is looking through an old vest, and thinks he has found a ten-cent piece, which, when brought to light, turns out to be a cough lozenge."

Valuable Hint to Editors.—A New York doctor writes: "You can double your circulation by washing your feet in cold water before going to bed at nights and after getting up in the morning."

Journalism.—Rev. George T. Rider, in his *North American Review* article on Journalism, says: "A latter-day parvenu, its ephemeral flutter, its perpetual coming and going, its very iridescence of transiency and unresting flux, constitute its *raison d'être*. . . . Its illumination is cold, auroral, spectral, as of the cerebrum." Of course; to be sure; certainly. We never said it wasn't — and we shall anxiously look for a solution of Mr. Rider's puzzle in the next number of the *Review*. We could never guess it.—*Norristown Herald*.

Suit for Damages for Insanitation.—Physicians should certainly know that when any of their patients are ill from a neglect of sanitary rules in hotels and boarding houses, that the proprietors of these hotels and houses are liable, in law, for damages; and patients thus made ill should thus be advised by their medical attendants.

An illustration of these facts has just been brought to the attention of the public. Mr. N. W. Andrews (son-in-law of Cyrus W. Field) and another citizen of New York, were boarding last summer at "Seabright," at Bellevue, a summer hotel on the Atlantic, and very near Sandy Hook. Both of those, who became ill there with typhoid fever, were well when they reached there, and remained well for several weeks afterward; long enough to render it certain that they did not bring there, in their own persons, the germs of the disease—typhoid fever—which, at the hotel mentioned, was so nearly fatal to them.

After a certain length of time had elapsed, both persons became ill with typhoid fever. The house was full, and in the full tide of a successful summer season. As soon as it was known that typhoid fever was prevailing on the premises, there was "a stampede," and almost all of the boarders left. The hotel manager, James H. Corey, demanded that the ill patients should be removed. This barbarous and inhuman request was not granted by the friends. The monster Corey then demanded that if the patients remained, the most outrageous prices should be paid by the sick, their attendants, nurses, and physicians. What was still more outrageous, a bonus of $5000 was demanded from each typhoid fever patient, for the privilege of remaining under such a roof. Instead of being violently resisted, this demand was granted, and the money paid; and the hotel, now deserted by the other "guests," was occupied by the hapless and helpless sufferers.

These both recovered. The hotel was examined, and it was found that the roof-tank, provided for flushing the closets, had not been filled during the season. One of the main sewers was broken, and a condition of insanitation, reckless and inexcusable, was discovered.

"The dog had had his day." The proprietor, James H. Corey, had received his money, and was triumphant; so also was the owner of the hotel property, S. H. Smith. But the day of dire retribution came; the day, perhaps, for disgorging foully-begotten gains; the day for damages, and, perhaps, for jail.

Recent local papers announce these significant and welcome facts:

"N. W. Andrews, son-in-law of Cyrus W. Field, has brought suit against Samuel H. Smith, the owner of the Hotel Bellevue, at Seabright, New Jersey, for ten thousand dollars damages for the improper sanitary condition of his house, which he alleges was the cause of the outbreak of the typhoid fever at that resort during the latter part of the summer and early autumn. He will also bring action against James L. Corey, the lessee of the hotel, for five thousand dollars damages for alleged blackmail in compelling him and Cyrus W. Field, Jr., to pay five thousand dollars for the use of the hotel after the fever made its appearance.

"James H. Corey, the Seabright hotel-keeper, was charged and pleaded to several indictments against him. One for robbery, plea not guilty, bail $1000; extortion, plea not guilty, bail $500; misbehavior as an innkeeper, not guilty, bail $500; nuisance, on joint indictment with Samuel Smith, plea not guilty, bail $300; riot, indicted with others, plea not guilty, bail $200; making the whole amount of bail $2500, with William Boardman security, to appear December 15th. These charges were founded on certain transactions in connection with the malarial scare last summer."

It were better that "the blackmail" money had not been paid, and that the premises had been held by force until the patients were well enough to be safely removed; but, as this was not done, the next best movement is that which has been adopted.

Of one fact the patients may rest assured, that they will have the support and sympathy of every physician, of every one who is a lover of justice, and a foe to insolent extortion and dishonest practices.

The public have their rights, and when they physically suffer from the insanitation of hotels and by wanton disregard of the rules for safety, as established by the laws of medical science, the culprits will be made to pay for their inhumanity and dishonesty.

It is a triumph for medicine that hotel proprietors can be held pecuniarily responsible for typhoid fever contracted on their premises, because of a demonstrable insanitation. Such a suit could not have been sustained a decade since, and it shows that the truth of medical teaching has a practical and pecuniary value, known to the law, and respected by the Public.

CONVERSIONS TO HOMŒOPATHY. — Jefferson Medical College physicians have been edified by the apostasy of Dr. W. W. Van Valzah, one of the visiting hospital physicians, to homœopathy. Dr. Van Valzah graduated from the college in 1876, and one year after he was elected to the hospital staff. January 21st, Dr. Van Valzah was given a bed in the hospital and entered on the register of the hospital staff, suffering from dyspepsia. Dr. J. L. Kite, the Hospital Superintendent, says that he left the institution much improved on March 31st. During his prostration the patient had the attention of the best skill in the staff, and, although Dr. Van Valzah was considered the victim of a delusion, he was treated by Da Costa, Bartholow, Bruen, R. J. Levis, Rex, and J. C. Wilson. After leaving the hospital Dr. Van Valzah went to Cape May. He relapsed while there, and by the advice of his landlady engaged a homœopathic physician, who effected a cure, only temporary, however, as he is now lying in a private hospital at Cleveland, Ohio, seriously ill.

When news of Van Valzah's treatment by a homœopathist reached the ears of the Jefferson Hospital staff, his former associates at once demanded his resignation. The offender's resignation was received six weeks ago, and his name wiped from the roll of visiting physicians. Dr. Samuel D. Gross said he knew nothing of the particulars of the case, "except that Van Valzah went over to homœopathy and we got rid of him. When a man goes over to homœopathy we have no further use for him. You can't mix oil and water together. They won't unite." Hypochondriacal monomania has often produced more startling results than a conversion to homœopathy, and in the history of the case there are at least hints in that direction, and it is well to suspend judgment until the nature of the "private hospital" is learned. Certainly the election of the man as a visiting physician does not reflect great credit on the Jefferson Hospital.

Anæsthetic Mixture.—The Vienna mixture, used in 8000 operations without accident, consists of three parts of ether and one of chloroform; Billroth's, three of ether, one each of chloroform and alcohol. The committee of the Medico-Chirurgical Society, of Great Britain, recommend one part, by measure, of alcohol, two of chloroform, and three of ether.

Fistula of the Cystic Duct.—Winiwarter, in *Wien. Med. Woch.*, gives the history of a case where the ductus choledochus became obliterated. In three weeks the gall bladder had attained an enormous size, and there was intense jaundice. Aspiration of the contents of the gall cyst failed, and he determined to establish a fistulous opening. This was successful, and the patient made a good recovery.

Helmholtz says, speaking of old theories, "If I were called upon to designate in one word the fundamental error of a former time, I should be inclined to say that it pursued a false idea of science in a one-sided and erroneous reverence for the deductive method."

Anecdote of Abernethy.—Being actively engaged in inserting a cervical seton in "a noble patient," who had requested that this should be done, his patient exclaimed, "Sir, you give me excessive torture; will your seton do good?" "No, sir," said the Doctor. "Then why do you insert it?" screamed the patient. "Because," said the doctor, "you told me to do so, and I will get five pounds for my work."

Medical Societies and Professional Courtesies.—The general impression in regard to medical societies is that they develop a feeling of antagonism, and, not infrequently, feelings of bitterness and hostility. That they have manifested this condition at times is true, and that they did so in times past, very often indeed, is also true, but such a criticism cannot justly be made in regard to the medical societies of the present day.

The objection now is that professional courtesy has become so much the rule, and so marked, that medical societies, strange as it may seem, are injured by it. Courtesy has usurped the place properly belonging to criticism; and while courtesy kept within reasonable bounds cannot be condemned, it is certainly a source of great injury when it is so extreme as to become fulsome eulogy, or even unquestionable flattery.

In times past, when a paper was read, it was subjected to criticism, and while this was often too severe or too personal, it was yet undeniable criticism; conservative in object and wholesome in effect.

The society was saved from the infliction upon it of bores and compilers, and incompetents, and self-advertisers. All this has passed away.

Now, any one, it matters not what his acquirements, or judgment, or experience may be, it matters not whether he be correct in thought and diction as well as in deportment, or whether juvenescence, real and callow, be written as fully on the entire offering as upon the offerer, the society, nevertheless, bears the infliction heroically, steadfastly, and universally.

Courtesy, extreme and foolish, usurps the place of criticism, and instead of any competent member rising and showing the error of the essayist or speaker, and in having thus imposed upon the good nature, or trespassed upon the precious time of the society, the custom now is for one of the oldest members to rise and say that he and his brethren have listened, with great pleasure and profit, to what has been so ably said or read, and to move that a copy of the remarks of the learned member be obtained for publication.

This motion is, of course, seconded ; no one wishes, it seems, to object, and so the proceedings of the society are, by so much, made originally asinine, and subsequently ridiculous.

It is useless to expect an attendance of the better members under such circumstances, or to expect that the transactions, when published, will not appear to be unworthy, if not silly and disreputable.

Doctors were formerly noted for their "quarrels ;" now they are suffering, actually suffering, from "professional courtesy." Indeed, there are now in every society a few of the older members, who, in their "deportment" to the readers of every paper, are so stiltedly polite and courteous, that Turveydrop, the great teacher of "deportment," would become green with envy.

This is all wrong. It is an error which has emasculated debate, which has banished criticism so necessary, and so instructive, and which, if not checked, will destroy every medical society.

No one asks for or advises a return to brutality, or rudeness, or personalities, with bickerings, and jealousy, and envy ; but it is time that flattery and sycophancy were driven from the medical forum, and that criticism, polite but absolute, were always more paramount and conspicuous.

INFLUENCE UPON A CLASS.—It is interesting to analyze the causes of the influence which teachers have upon a class. Some, like Chapman, and Holbrook, and Simpson, and Sayre are endless in humor and anecdote, teaching well all the while. Others, like Dickson and Caldwell, and Watson, and Flint, are chaste and elegant in diction ; eloquent often ; instructive always. Some, like Thomas, and Bennett, and Hunt, are concise and accurate ; with a masterly power of arrangement, and with a genius for lucid differentiation, and effective summary. Some are paternal in manner and action. Some fraternal, and kind, and companionable. Medical literature abounds with such mementoes and descriptions. In no part of it, however, is there to be found a more charming incident than the following :

Clot Bey, the French surgeon, attained eminence in the service of Mehemet Ali, and died in 1868. For about 1700 years there had been no public lectures on anatomy delivered in Alexandria, the very birthplace of human anatomy ; and so strong were Mussulman fanaticism and prejudice, that although he had the authority of the Pasha to institute a school and commence demonstrations, when, forceps and scalpel in hand, he opened the thorax of a body, a student rushed upon him with a poignard. The blade slipped over the ribs, and Clot Bey, perceiving that he was not dangerously hurt, took a piece of plaster from his dressing-case and, applying it to the wound, observed to the class : "We were speaking, gentlemen, of the disposition of the ribs and sternum, and I now have the opportunity of showing how a blow directed from above has so little chance of penetrating the thorax," and he then went on with his lecture.

THE COLUMBUS MEDICAL JOURNAL of December contains a supplement, in which Dr. J. F. Baldwin, formerly one of the Faculty of the Columbus Medical College, of ill fame, gives to the Profession extracts from most of the best medical journals, showing that in his recent trouble with Columbus Medical College Faculty, he, (Dr. Baldwin) was right, and that the unfortunate institution named was wrong, and has justly sunk below respect and notice. His vindication by the Medical Press has been handsome and complete ; while the condemnation of the Columbus Medical College by the Press has been uniform and overwhelming.

A NEW LITANY.—District Visitor : "Your boy looks very bad, Mrs. Jones ; what's the matter?" Mrs. Jones : "Yes, ma'am, he be very bad ; and, what's more, the doctor has made him worse. I'm sure we poor people ought to pray with all our heart, 'From all false doctorin', do, good Lord, deliver us.' I never saw its meaning afore."—*Medical Times and Gazette.*

GAILLARD'S MEDICAL JOURNAL.

(*Formerly the Richmond and Louisville Medical Journal.*)

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ORIGINAL ARTICLES.

CAPSICUM ENEMATA IN OPIUM POISONING. By JAS. G. KIERNAN, M.D., Chicago, Ill.

Opium poisoning is a not unfrequent occurrence from all sorts of causes. An opium habituè takes an overdose. A betrayed woman gets laudanum to quiet a colic and proceeds to commit suicide. Children drink laudanum left within their reach by injudicious parents and nurses. From all these and allied causes, opium poisoning is often an applicant for medical treatment. Any means of treating it which is readily applicable is therefore always in order. In the suggestion of capsicum enemata I can claim originality, but not priority.

Dr. Chas. H. Hughes* was the first to use capsicum enemta in a case of opium poisoning. A patient had taken opium with suicidal intent and Dr. Hughes being called in consultation by Drs. Rœmer, Hypes, and others after the usual routine remedies had been used ordered an enema of one drachm each of aqua ammonia and tincture of capsicum, using coffee for a vehicle. The patient rapidly rallied and recovered. During the year 1881 I was called to a case which gave the following history: A patient suffering from the insomnia of a prolonged debauch purchased two ounces of laudanum, one of which he swallowed. Within half an hour he had sunk into a deep slumber. A physician was then called who evacuated the stomach by means of the stomach-pump relieving the patient of about half the laudanum taken.

This physician found that despite the use of strong coffee and constant movement the patient did not improve. Dr. J. S. Jewell was then called in consultation who advised the use of atropine Under all these varied means of treatment there were temporary rallies, but after six hours of constant treatment the patient seemed to sink into and remain in a very deep coma. At this stage of affairs I was called in consultation and having some faith in the old idea of a derivative action ordered three drachms of tincture of capsicum to be poured directly into the rectum. The effect was almost magical. The patient walked around rather briskly, talked freely, and in about an hour was in his usual condition other than being much exhausted and complaining of great dryness of the throat obviously the result of the atropine.

In a second case a five year old child obtained possession of a bottle of laudanum belonging to its father who was a victim of gastric cancer and in consequence an opium habituè. From the bottle the child drank approximatively about a teaspoonful. Atropine, emetics, the stomach-pump and the galvanic battery were tried with temporary success. But the influence of the laudanum manifested itself in a gradually increasing coma. Remembering my former experience I ordered an equal quantity of tincture of capsicum to be poured into the rectum. The result was a slower but equally permanent success. The child for some time after suffered from inflammation of the rectum from which it made a slow recovery. From the case narrated by Hughes and the two just cited it would seem that this measure would be, at least a good addendum to other means of treatment. Hughes* claims to have had equally good results from capsicum enemata in chloral poisoning. Hypodermic injections of strychnia being used in addition.

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* St. Louis Medical and Surgical Journal, 1878.

THE TREATMENT OF THE INSANE.

By CHARLES H. S. DAVIS, M.D., Meriden, Conn.

Unfortunately, owing to evil ancestral influences, inherited organic imperfections, vitiated constitution, or *poor stock*, thousands of persons are born into the world with such a flaw in their nervous organization, and such a native deficiency of mind, that they will be non-producers and a burden to the State, and all the care, and education, and training, will not prevent them from being vicious, or criminal, or insane. Owing to a bad organization they must and will go wrong.

Any morbid condition of body, whether produced by alcohol, or from other causes, is transmitted to children just as surely as likeness in form or feature, and thus infirmities, defects, peculiarities, strong animal propensities and morbid appetites and tendencies, constantly craving indulgence, and with weak restraining faculties, are entailed upon offspring.

Every form of bodily disease produces its appropriate effect upon the mind. Some diseases cause irascibility; others, deep mental depression; others, infirmity of will; others fill the mind with uncontrollable jealousy and suspicion; some give rise to a strong propensity to suicide; others dispose the patient to a lavish and reckless expenditure. In all these cases the propensities are irresistible, so long as the pathological condition remains which gives birth to them.

The feverish activity of life, the numerous passions, and the great strain of mental work incident to the multiplied industries of an active civilization, climate and institutions—civil, political and religious, social and business—are the chief and primary causes of the development and very rapid increase of that nervous condition which is the foundation of the long train of nervous diseases which lead to insanity.

In careful breeding of cattle, at least ninety-six per cent come to maturity, and of horses ninety-five per cent, while of children at least thirty-three per cent perish in infancy, owing to a low or vitiated condition of parentage.

In the barbaric age the extermination of those who could not help the State or tribe was considered the wisest political economy, and nothing indicates more fully the progress of civilization than the care which is now being given to the helpless classes. In the State of Massachusetts alone there are probably 60,000 helpless dependent, idle consumers, and criminals, who are supported by the State, and this proportion is as great in other States, and is considerably less than in most civilized countries.

The census of 1870 gives about 60,000 lunatics in the United States, which, as is well known, is far below the actual number. There are about 50,000 idiots in the United States, about 2500 being in public institutions, and the census of 1870 gives about

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* Optimist and Neurologist, July, 1882.

20,000 deaf mutes, and 20,000 blind persons.

It is just three hundred years ago since the Spanish monk, Pedro de Ponce, showed that deaf mutes might be taught to speak, and about one hundred years ago since the first public institution was founded for the instruction of deaf mutes. Now there are 80 in Germany, 45 in France, 22 in Great Britian, and 96 in the United States. The New York asylum contains nearly 600 pupils.

A child of slender mental abilities, if its education is neglected, will not make much more progress in its mental development than a bright deaf mute child under favorable external circumstances, even although it has not enjoyed the instruction specially adapted for the deaf and dumb.

There are some thirty institutions in Europe for the instruction of the blind, and about the same number in the United States, and the making of baskets, mats, rugs, brushes, wood-turning and netting are among the trades which the blind practice with success.

Until a comparatively recent period it was not thought possible to improve the mental condition of idiots, and it was thought to be only a waste of time and philanthropy to do more than care for their bodily comfort, and even so late and intelligent a writer as Esquirol showed his want of faith by saying that "time, talent, and labor may all be so expended as virtually to be thrown away." Experience has shown that under proper instruction, the faculties of idiots may be brought out in a remarkable manner, and they may be made automatically skilful in certain trades, and that their mental faculties, both moral and intellectual, may be greatly developed.

The existence of this large body of dependents is phenomenal—not essential in society, and their numbers depend upon social conditions within human control.

Civilization is doing all within its power to educate and render serviceable to the State, the deaf, dumb, blind, and idiotic, yet there is a large class of non-producers for whom nothing has been done for their relief or improvement during the last hundred years, except perhaps to take them out of their, in many instances, squalid homes, and put them in costly and luxurious asylums, for which millions of dollars are annually spent.

The pauper and criminal classes who are many of them no more responsible for being in those classes than lunatics, have a right to receive the same kind care and attention. That the insane are not put in these costly palaces for medical treatment we can see when we find that in the New York State Asylum there are only four physicians to six hundred patients, and in the King's County Asylum four physicians to seven hundred patients, and in the Blackwell's Island Asylum only seven physicians to 1260 patients. In one asylum with over eight hundred patients there are but three physicians, one who has besides his medical duties, the management of a farm of about two hundred acres, the furnishing of supplies, etc., so that it is impossible to give any proper examination and observation to the cases.

Statistics show that in civilized countries there is an average of one insane person to five hundred inhabitants, and the average is steadily increasing.

It is impossible that the State shall make adequate provision for all the insane, hence many must come under the treatment of the physician, and there is no doubt but more than half of those who are locked up in asylums would be greatly improved if they were placed in the care of an intelligent physician, who oftentimes with his large experience, would be able to recognize the cause of the insanity sooner than one who has been restricted to the custodial care of the insane, but without any experience in the care of the sick. As Dr. Hammond says, "there is nothing surprisingly difficult, obscure or mysterious about diseases of the brain, which can only be learned within the walls of the asylum."

For the violent insane, those who are dangerous to themselves and others, confinement in an asylum may be necessary, but for other forms of insanity it is often very injurious.

Dr. Dickson says:* "As a matter of principle I should strongly recommend that a patient should never be sent to an asylum if such a course can be avoided. There is no law prohibiting the treatment of a patient at home. The lunatic is not an animal to be put under locks and bonds; and it is only when he disturbs the public peace, or when by cruel or unusual treatment, other people infringe the law as regards him, that authority can interfere in his behalf."

Dr. Seguin says: "The association of an insane person day after day, year after year, with others similarly affected, with scarcely the least contact with people of sound minds, is certainly in opposition to the first principle of true psychological medicine."

Dr. Bucknill, in his recent work on "The Care of the Insane," says: "A congregation even of pauper lunatics is a great, though doubtless an unavoidable evil, while a system which compasses the herding together of lunatics of large fortune, or even of competent means, for any purpose but the important one of public safety, is but a mouldy method of routine and prejudice."

It seems strange that in this enlightened age there should be a disease which should condemn a person to imprisonment for years or for life, or reduce its victims to the same level with persons accused of crime. And the sole power of discharge rests in the judgment of a single man, the superintendent, who has under his care, with two or three assistants, perhaps several hundred persons.

Instead of removal from home, the want of employment, control of attendants, monotony of life, and association with fellow-patients worse in some respects than they are, there should be liberty, domesticity, classification, employment, amusement, and social intercourse between those who will enjoy it.

It seems to be the opinion among physicians as well as among the laity, that as soon as a person begins to show any aberration of the mind, no matter from what cause, he or she must at once be shut up in an asylum, before the family physician has tried to find out the cause of the insanity. As Dr. Gray remarks, "unfortunately, superstition and ignorance long prevented calm investigation, and stamped the disease, in general estimation, and, in a large measure, in the view of medical men, as one but little amenable to treatment, and as mainly a condition demanding custody for safety. And this state of things unhappily still exists to such a degree as greatly to embarrass inquiry, and can only be dissipated by such investigations as will place insanity in the category of nervous diseases, to be studied and treated as other bodily diseases." Dr. Rufus Baker has well said that "the cause of insanity often lies in disease of the pelvic organs, in gastric and intestinal disturbances, from diseases of the skin, from arterial alterations and degenerations, from disease of the kidneys, from tubercular disease, sometimes from injuries to the head; and that there is rarely any primary lesion of the brain in insanity. The alterations in tissues and brain-cells occasionally found in autopsies of the insane are more often the result of remote disturbances, producing changes and degenerations in the capillaries of the brain, which precede any alteration of the brain structure that may be found; and that this wholesale practice of drugging the insane with narcotics and bromides until the nervous system is completely blunted, and the patient demented as the result, is the most cruel malpractice and deserves the severest condemnation."

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*The Science and Practice of Medicine in Relation to Mind, etc. London, 1877. P. 319.

Insanity is not an hereditary disease. But when we trace back the record of an insane person we often find hysteria, mild monomania, hypochrondria, restlessness, drunkenness, eccentricity, a persistent disuse of moral feeling, and a persistent exercise of selfish and mean tendencies, excesses and errors.

Positive evidence of insanity cannot be found in more than thirty per cent of the insane, in postmortem examinations, and those alterations which must be supposed to determine the disturbance of the cerebral functions, are undemonstrable with our present means of investigation.

Mental disorders are neither more nor less than nervous disorders, in which the mental symptoms predominate, and their separation from other nervous diseases has been a great hindrance to their proper understanding by the medical profession. The physician is called upon in the first instance to treat the insane, and at a time when they are most susceptible of cure, and it is on his opinion that measures are taken to deprive the patient of his or her liberty.

It should therefore no longer be a disgrace to the medical profession that a patient should be locked up in a lunatic asylum as soon as he or she first shows signs of mental aberration, without a more thorough diagnosis of the case and every means tried to remove the cause of the insanity.

There is no doubt but that physicians have been and are extremely careless in their diagnosis and treatment of lunacy. General paralysis of the insane is a disease which, to receive proper treatment, should be recognized in its earlier stages. Yet Dr. Mc Donald, the Superintendent of the New York City Asylum for the Insane, says that an examination of the certificates sent to the asylum by gentlemen in private practice shows that they recognized the true character of the disease in but three cases out of thirty-five in which they had made affidavits.

The superintendents of insane asylums are, as a rule, conscientious and painstaking men, and no doubt are thoroughly educated in their specialty; but one objection to asylums is that all of them are too large to allow of due individualization, the absence of which will bring to naught the best-intentioned efforts for the improvement of their inmates.

OXYTOCIC ACTION OF QUININE AND CINCHONISM IN PUERPERAL FEVER.

By M. SCHUPPERT, M.D., of New Orleans.

"E pur si muove."

In case there should still be some doubting Thomases utterly refusing to believe in the oxytocic action, the specific existing and stimulating energy quinine engenders in the uterine system, I am able to furnish for their enlightenment additional proofs to those I have at different times published in the AMERICAN WEEKLY and *Bi-Weekly Medical Journal.* Not merely that since those mentioned publications I have seen under the administration of quinine in further instances the catamenia return after they had disappeared seven and twelve days in otherwise regularly menstruated women, but I have observed additional cases of abortion taking place without a synchronous presence of malaria intoxication. I spare the reader to pass over the recital of the different specified cases. If this naked statement should be considered insufficient to support my repeatedly uttered assertions of the parturient effects of quinia, then any further description of cases will not heighten the statement.

In the February number of the *Medical Brief* Dr. C. F. Martin writes in reply to Dr. Harris, concerning quinine as a parturifacient: "*If the doctor will examine the reports of investigators on the subject he will have no difficulty in finding a correct answer to his question.*" With an acknowledged limited knowledge of the literature on that subject, the doctor could probably not give a wiser advice. But if what further follows in his letter is the opinion he has formed from his studies, he seems far from being correctly informed.

"Quinine, of itself," he says, "has no power to excite uterine contractions; but simply stimulates the contractions when brought on in the regular course of nature"—as if what stimulates contraction could not itself have a contracting power! "After labor is completed it promotes the permanent tonic contractions, thus lessening the liability to hæmorrhage, the severity of the after-pains, and diminishes the lochial flow." Indeed, a nice analytical discrimination between causing contraction and stimulating and promoting contraction! Against the use of quinine after labor is completed I have no objection to its use, but against its innocence as a parturifacient in the sense in which it is here used I have to protest. That a drug which has been conceded to possess tonic contractive powers after completed labor shall be indifferent to the gravid uterus, passes my comprehension.

In the same number of the *Medical Brief* is another article, from the pen of E. M. Winslow, M.D., of Springport, Mich., who says of quinine, "that it undoubtedly is a parturifacient, but not an abortant." A parturifacient, or parturient is a medicine to which is attributed the property of causing abortion. The doctor's definition, then, *a lucus a non lucendo,* will not do. The doctor will have "made use of quinine during a third of a century as a sheet-anchor in preventing abortion threatened from 'chills and fever,' and in cases where the child (fœtus, rather) had been active after the chills and labor pains had come on prematurely." He does not remember to have failed in a single instance "in arresting the labor." But "in cases in which the chills had caused the death of the child (fœtus) the labor had progressed to its final termination," and despite all the efforts of the doctor. In the latter instance the action of the quinine is difficult to localize or to calculate, but quite different and singular is on the other side his statement: that during a space of some thirty years quinine never failed him to arrest labor if produced by chills and fever. As a matter of course, the number of years of practice do not give a criterion of the number of cases treated. The statement, therefore, is defective in its most essential part. The death of a fœtus by whatever cause produced will in time bring on its expulsion. Chill and fever is a known cause of the death of the fœtus. If such can be prevented by the administration of quinine, one common cause of premature labor will be done away with. But how is it if the labor pains do not cease, if the fœtus does not die, though chills and fever have ceased? Dr. Winslow has never experienced such a case; but others have, and we are forced to the conclusion that no matter if the fœtus has died or not, if the chill and fever has disappeared and the labor pains continue, and abortion takes place, the quinine is considered as the *causa movens*. Yet I have other and more convincing proof of the oxytocic action of quinine than in cases of chills and fever. I will relate here one of those instances: A woman received an injury on her head near the right temporal bone. The wound was apparently not to be considered serious if it only could be kept in an aseptic condition. Carbolic water applications had been ordered by the attending physician, but unfortunately from want of proper nursing the aseptic condition of the wound was not obtained. The wound soon presented a diphtheritic appearance, and when the temperature increased the doctor ordered a dose of 15 grains quinine. Meanwhile I had been called in consultation. Some hours after the administration of the quinine we were informed that labor pains had set in. A fœtus was born in time, which died soon after its birth, and the mother followed a few days later from pyæmic intoxication. "How is that for high?" Oh, it will be said that woman had an idiosyncrasy against quinine! But then there must be a great many women with such idiosyncrasies, since I could furnish a not inconsiderable number of cases where quinine has proved to be a parturient, acting as a morbid excitant on the uterine system, and is it a wonder when as at the present time we see 15 to 20 grain doses of quinine given in cases where 15 or 20 years ago from 2 to 3 grain doses were considered normal doses, while the illustrious M.D.'s of that period feared that larger doses would cause "infiltrated effusion of blood in the brain." Though that fear seems not to be realized in the degree expected, still the experienced dizziness with deafness and blindness in some cases are proof sufficient that such high doses are not without its dangers, and most so seems this to be the case in pregnant women of inducing premature labor. The opposition to these views of some of the leading minds has not been without influence on the majority of practitioners. But in cases where the parturient action of quinine cannot be denied, to have recourse to idiosyncrasy of the individual in order to explain its effects, seems to me disingenuous and unreasonable. As long as such cases do not appear more abundant, or any other explanation should be wanting, the efforts of the opponents of the oxytocic action of the quinine will be abortive.

Dr. Winslow mentions his own wife's condition, that she never had become acclimated, and that he had had recourse to frequent administrations of quinine against her intermittent fever attacks. "Sometimes," he says, "when I would go to my quinine bottle and replenish my pet medicine, I would notice that quite a quantity had disappeared, and upon inquiry his wife would say, 'Oh, I have been taking it!'" Now should the doctor really not know that the human system may by a constant internal use of even poisons become tolerant to them. Does he not remember the history of the King of Pontus, who for fear of being one day poisoned with arsenic had by from the fourteenth to fifty-first day; in case of gangrene, on the fifty-first.

It is evident that examinations should be conducted very discreetly. After the expulsion of necrotic tissues, no attempt at reposition should be made.—*Ibid.*

JOHNEN: NARCOSIS IN OVARIOTOMY AND CESAREAN SECTION (*Centralbl. f. Gynäk.*, No. 40, 1882, from *Centralb. f. Chir.*, 1882, No. 20).—In five cases of Cesarean section and four of ovariotomy, where he either operated or assisted, no anesthetic was given. The advantages claimed are the avoidance of vomiting, a possibility of less hemorrhage, and ability to conform to the wishes of the operator in many ways during the operation. The pain is said to be not very great, aside from the first incision and the passing of the sutures. In several cases where it was necessary to remove strong adhesions, the *patients did not complain of great pain.* He thinks many fatal cases which are ascribed to shock, are rather due to prolonged narcosis. [The above is recorded as much on account of its curiosity as from any other cause. It only proves that human thought moves in circles. It took thirty odd years to convince some surgeons of the utility of anesthetics, and now that all the world has been converted to the belief in their blessedness, the ball begins to roll in the other direction, and anesthetics are being discarded. In some operations this may do very well; but, in such capital operations as the ones referred to, there is a moral side, a sentimental side if you choose, which ought never to be overcome. What is the use of giving up anesthetics in ovariotomy—an operation in which the mortality, with different surgeons, is as low as three per cent? Doubtless narcosis is the cause of death in some of the cases which the author has referred to, but those operations (removal of the uterus, for example) are, in some cases, protracted through five hours. If a surgeon cannot perform any operation in less time than that especially when chloroform is the anesthetic used, as a rule he had better not operate.]

WERTH (Kiel): EXTIRPATION OF A CYST OF THE MESENTERY: RECOVERY (*Arch. f. Gynäk.*, XIX., 2, 1882).—The patient happened to notice an abdominal tumor during an attack of colic, three months previously. The tumor was of the size of a child's head, very movable. Soon after W. had examined the woman, the tumor became incarcerated in the pelvis, causing great pain, vomiting, and general prostration. Laparotomy. The tumor was imbedded between the two layers of the iliac mesentery, and was easily enucleated. Recovery. The contents of the cyst were of the consistency of thin gruel, not unlike a suspension of chalk in water. Microscopically nothing was found in the contents of the cyst but albuminous and fatty detritus. The wall of the cyst showed a distinct lamellar structure. W. failed to find epithelial cells, the predominant structural elements being those of the connective-tissue type. As to the nature of the tumor, W. thinks that it was a mesenteric gland transformed into a cyst.—*Ibid.*

LOMER (Leipsic): ON OVARIAN TUMORS COMPLICATING PARTURITION (*Arch. f. Gynäk.*, XIX., 2, 1882).—*Conclusions*:

1. In case of ovarian tumor complicating parturition, surgical interference should not be delayed too long.

2. Reposition of the tumor ought to be tried first.

3. If this proves impracticable, puncture has to be resorted to.

4. Puncture has to be followed by a free vaginal incision where the contents of the tumor are too thick to be drawn through the trocar.

5. Any obstetrical interference before emptying the tumor is to be objected to, as being too dangerous.

6. If the tumor is a solid one, perforation and Cesarean section are the only means left for delivery. The performance, in a given case, of either of these operations, depends on the peculiarities of the case, as well as on the personal opinion of the accoucheur as to the feasibility of both operations.—*Ibid.*

"HYPODERMIC" INJECTIONS AND THE "COMPRESSED SOLUBLE HYPODERMIC TABLETS." By M. SCHUPPERT, M.D., New Orleans, La.

There have of late come into use various remedies, as for instance, the salts of morphia, strychnia, atropia etc., in the form of pellets often being mixed with sodium chloride as an integrator to give increased bulk and to be made more readily soluble. The main cause for abandoning the solutions of those substances in so far as used for subcutaneous injections and replacing them by a dry form was the formation of a "*Penicillum*" in those solutions, which it was asserted rendered the use of the medicines "*uncertain, if not dangerous.*" Such, at least, was the opinion of H. A. Wilson M.D., of Philadelphia, at whose instigation Messrs. John Wyeth & Brother of Philadelphia began to manufacture those "*soluble compressed pellets, or hypodermic tablets.*" But the object to be realized in carrying instead of, in solution, the alkaloids in a dry form, to be dissolved previous to using them, seems to me an improvement by John Ballhorn as the Germans say: In order not to be forced to apply the "incidit in Scyllam qui vult evitare Charybdia" the doctor ought to have at the same time given the advice to carry sufficient distilled water, or, water free from the spores of his "Penicillum." At the present time the water used for the solution of the pellets is taken in almost every instance, at least in our city, out of our cistern and more need hardly be said. As long as the nature of the solvents of those pellets is left out of calculation the doctor's advice is but a "robbing of Peter to pay Paul," if not worse.

My experience of the method of using certain substances in solution subcutaneously dates even previous to the publication of that method by Wood. My first application consisted in a solution of woorara in a case of trismus. The case got well, but in a second case of tetanus it failed, and I arrived at the conclusion that the first case might have got well even without the woorara or curare, the more so since at the same time other remedies had been applied. I have during nearly thirty years made an extensive use of these subcutaneous injections, most exclusively using the salts of morphia. For a long time I could not understand why occasionally almost every injection resulted in an abscess while at other times such did not happen. I first attributed it to the constitution, but then the same variation happened often in the same persons. I had made use of both salts, the sulphate, and muriate of morphia, and I met with those abscesses in the beginning only, in using the latter. The secret was finally found out. The muriate being a much more soluble salt than the sulphate I had never applied heat, while in using the sulphate I invariably boiled the water. The solvents I made use of was of course cistern water. When we consider the fact that such rain water in washing off the dust from the roofs where it had been transported from the streets will at times no doubt contain a number of various organisms, or their spores, it cannot be wondered at, certainly, that such abscesses follow if such spores have not been killed by boiling the water in which they are contained.

If I am permitted to draw a conclusion from the nature of those abscesses, in regard to contents, size, time of appearing, from the size of a small bean to a man's fist; the contents from a thick, gummous, transparent, odorless liquid, to an opaque, thin, yellowish offensive smelling fluid, there seems reason when some of them even appear years after the injection was made, while others ripen not long afterward, that these various abscesses are caused by a variety of organisms; the more so when these different abscesses appear in the same individuals. Since I had arrived at the true solution of what seemed to me at first a puzzle I never failed to boil the water which was intended for being used for subcutaneous injections. To that water was at the same time added as much phenol (carbolic acid) to obtain a 2% solution.

Knowing the necessity of a particular and scrupulous cleanliness, in order to exclude every kind of germ, I always prepared the solutions myself. Twenty grains of a morphia salt dissolved in one ounce of water, forms a solution of which 12 streaks of those syringes at present in use, contain ½ grain of morphia. From the time I made use of solutions thus prepared, I never saw the formation of "Penicillum" or a subsequent abscess. In cleaning the syringe a 3% carbol water ought to be used. In applying the syringe care ought to be taken that the point of the needle does not re-enter the skin, better is it to enter the muscle.

The "advantages" claimed by Dr. Wilson's "over any other method" are therefore illusory, and the pellets so far as their use for subcutaneous injections is concerned, if not at the same time accompanied by pure water, must be considered if not "dangerous" at least as a mischievous and noxious innovation.

From the time that I had reason to suspect the contents of these abscesses to contain bacilli such as Koch has of late proved to be present in tuberculous diseases I have given them my special attention, and though not in all, in some of them, at least, the tuberculous character could not be denied. Yet never did I observe an abscess following a subcutaneous injection, on any other spot but where the injection had been made; the reaction remained always a local one. Never did I observe constitutional symptoms to follow of a tuberculous nature. I acknowledge that this observation has so far given me great consolation.

Under all circumstances that question is of sufficient importance for pathological anatomists further to inquire into. With the use of water containing the spores of such bacilli, a dissemination into the body is not impossible. If used for instance where scabs for *vaccination* are dissolved, who will deny the possibility of an infection taking place. The minimum quantity of the water used will certainly make no difference. Attention has often been called and the fact is undeniable that with the extension of vaccination tuberculous diseases have been on the increase. So much for Doctor Wilson's "pellets" and the important consequences connected with that dangerous improvement.

OVARIAN PRESSURE.—A Paris correspondent of the *Chicago Medical Journal and Examiner*, speaking of the results of ovarian pressure as practised by Charcot at the Salpetrière, says:

"One of the first patients presented was a young girl of charming appearance. The only visible sign of a departure from normal physiology was a persistent inward contraction of right foot. She was, however, wearing a ceinture which produced pressure in the region of the ovaries. The ceinture was removed, and immediately a violent fit of coughing was developed, which even for the short time that it was exhibited, was positively painful to observe. The ceinture was reapplied, and the coughing ceased as by magic. Another patient was presented, with whom the removal of the ceinture was followed by the regular development of the various stages of epilepsy, exhibiting all the violence of agitation, frothing at the mouth, rapid, powerful muscular movements, followed by the most complete opisthotonus. The application of the ceinture cut short these paroxysms at any particular stage of their development with the most remarkable promptitude. Some half dozen patients were presented, illustrating in a similar way the same influence.

In one case when the removal of the ceinture was not followed immediately by an onset of the epileptic attack, the assistant gave a very slight but rapid tangential blow of the hand in the small of the back, and immediately the epileptic attack began, culminating in the cataleptic condition.

"One case was exhibited of unusual interest, on account of its history. Becoming pregnant, it was found that the points on which pressure had to be exerted in order to relieve the attacks of epilepsy, gradually ascended as the pregnancy developed."—*Boston Medical and Surgical Journal.*

EUCALYPTUS GLOBULUS IN GYNÆCOLOGICAL PRACTICE.—This drug is destined to play an important part in gynæcological therapeutics. It is only since 1865 that its therapeutic action has been tested, and, with the cloud of new remedies constantly before the attention of the profession, it has not received the full trial which it is sure to get eventually.

Dr. Andrew F. Currier reports in the *American Journal of the Medical Sciences* for October, 1882, five different cases of various natures in which the local application of this drug on vaginal tampons proved of the greatest anæsthetic value. Besides its anæsthetic effects, it is, as we know, antiseptic and antiperiodic, and hence it will be of use in that large class of cases where foul-smelling discharges exist, and also as an adjuvant in the treatment of malaria. The absorptive function of the vaginal mucous membrane has been comparatively little employed in constitutional treatment, and this is a field which yet remains to be worked up. A daily application of this substance must have more than a local influence. It will usually be difficult to give treatment so frequently, excepting in hospital practice. Much better results would follow could a continuous effect of this, as well as of some other means of treatment, be obtained, but the expense and annoyance, and in many cases the dread of pain prevent. The very fair degree of success obtained in treating the cases described in this paper leads him to believe, that in less severe cases we can feel almost positive that we can give great relief; indeed, his experience in private practice confirms that belief. In a quite different class of cases eucalyptus will also be serviceable. He refers to wounds of the breast after the removal of tumors. With the increasing favor of the open method of treating such wounds, especially when the growth removed has been of a cancerous nature, its stimulant and antiseptic properties will prove very acceptable.

HOT PACK IN PUERPERAL ECLAMPSIA.—For the cure of puerperal eclampsia either in the puerperium or the last months of pregnancy, active diaphoresis alone, induced by a hot bath, 40 to 45°C, followed by the pack, is all sufficient. The bath must not be prolonged over one half hour, and two or three hours suffices for the envelopment in the pack. This method properly carried out, according to Brens, will also cause œdema and albuminuria to disappear without interruption of pregnancy.—Brens. *Arch. f. Gyn. xix. p.* 218.

INTESTINAL OBSTRUCTION IN AN INFANT.—By S. A. Catlin, M.D., McDaniels, Kentucky.

On the 13th of September, 1882, I was called to see Otho F——, an infant aged eight months, presenting the following history: A well nourished child, in good health up to the 10th day of September, when after being carried on horseback for some miles over a very rough road, suddenly became ill, getting very fretful and making frequent attempts at stool, passing only a little bloody mucus. In the afternoon it was taken to the family physician, he making a diagnosis of a "rising in the head," and prescribed two doses of some cathartic, mostly calomel. The child was then taken home over the same road. The medicine failing to act and being no better the next day, a second round of physic was given the child. The same thing was repeated on the third day, being followed by nine doses of castor oil, the last of which was a tablespoonful. At this stage of the disease I was called. The first physician being unable to ride, a consultation was not had. To describe the suffering condition of the helpless child is impossible, and I will feebly express it by saying it was terrible. With five doses of calomel, etc., and nine doses of oil down, and no action from the bowels, the effect can be imagined. With a bounding pulse 135 per minute, temp. 102½, the bowels swollen, constant vomiting, and the most violent efforts at stool, rendered the little patient miserable. The matter vomited was principally bile and oil, but soon changed to fecal matter and coffee-ground substance.

On examination I detected an elongated tumor in the colon, near the sigmoid flexure, about two and a half inches long. The bowels were tympanitic, except over seat of tumor, which was quite dull on percussion. The condition of the child was such as to prevent a thorough examination, but a digital examination per rectum detected a sort of "bagging down," if I may use the expression, of the parts above, but the point of obstruction could not be reached. The discharge of thin bloody mucus continued at each straining. I at once diagnosed intussusception of the colon near the sigmoid flexure. It being my first case of the kind, what to do was now *the* question with me. I remembered to have heard an excellent lecture on the subject by Prof. Matthews, at the Kentucky School of Medicine, last spring, in which he favored filling the lower bowel with warm water or air. Not having facilities for using air I decided on the use of the water, but I was of the opinion that the time for reduction of the invagination by that means had passed, yet I thought the application of water to the seat of the obstruction would be beneficial in a high degree, and so it proved. First I thought quieting the stomach and peristaltic action of the bowels was the chief indication, and I began to administer a twelfth of a grain powdered opium every four hours, with one eighth of a drop fl. ext. belladonna between. I soon discontinued the latter as it disagreed with the stomach, but I continued the opium with a steady hand for seven days and nights, often finding it required every two hours in order to produce the desired effect and ward off convulsions, which were constantly threatened as soon as the opium began to lose its effect. I used the syringe by attaching the nozzle to a flexible rubber tube, introducing into the bowel as far as it would go, which was but a few inches. By inverting the child, I would slowly fill the lower bowel to overflowing, using from a half to one gallon of water at the time, and at the same time gently knead the bowels. This was repeated at intervals of from four to six hours, and invariably gave the child ease and a quiet sleep would follow. I also used poultices and hot applications to the bowels. To quiet the inordinate thirst I gave elm mucilage freely and plain cold water *ad libitum.* Owing to the seat of the obstruction being low down, the action of the kidneys was not materially changed or interfered with. The child nursed occasionally, very little at a time, and refused all other nourishment. I persevered in the above outline of treatment against hope for seven days and nights, the only visible result being the quieting of the patient and passage of blood and mucus. At the end of the seventh day (the tenth from the beginning) a thin yellow fluid of bad odor passed, accompanied by a discharge of gas, the first since the attack. The eleventh day of the illness a quantity of a jelly or gelatinous matter passed, followed by sloughing of portions of the invaginated part of the intestine and thin fetid pus. Soon came a pint of the jelly material and then hardened fæces, followed by six or eight large natural actions. The fever subsided, the tongue got moist, the swelling in the bowels gave way, the pinched, anxious countenance was gone, and the child took the breast freely.

At this writing (the 18th day) the patient is almost well. In conclusion, I wish to return thanks to Dr. Bruner of Short Creek, Grayson County, Kentucky, whose valuable counsel I sought. —*Medical Herald.*

OLSHAUSEN: MYOMOTOMY AND SUPRAVAGINAL AMPUTATION OF THE UTERUS (*Zeitschr. fur deutsche Chir.*) —Although great progress has been made in the performance of laparotomy for a variety of purposes, by profiting from the experiences of ovariotomy, especially in operations for the removal of myomata of the uterus, whether the body of the organ remains intact (myomotomy) or the removal of the neoplasm necessitates the opening of the uterine cavity with ablation of a greater or lesser portion of the organ (amputatio uteri supravaginalis), we cannot say that we have profited by those experiences as far as the treatment of the pedicle is concerned. In ovariotomy, for instance, the extraperitoneal method of treating the pedicle first met with much success until the introduction of antisepsis, when the intraperitoneal treatment was resorted to and is now universally practised. It is surprising, therefore, that great operators like Péan, Billroth, Hegar, etc., have made no efforts to try this method in this class of cases. One should think that what can be done to the pedicle of an ovarian cyst is also applicable to that of other tumors, *i.e.*, the return to the abdominal cavity and, as far as practicable, complete closure of the same. The chief obstacle in cases of myomata was the difficulty of preventing secondary hæmorrhage from the pedicle, which is always very thick and hard ; another was the fear of producing decomposition by the return into the cavity of so large a mass of ligated tissue. The latter objection is simply wrong, for we cannot render the pedicle of an ovarian cyst any more aseptic than that of a myoma ; it depends entirely upon the careful management of the field of operation, *i.e.*, to prevent the entrance of septic germs from without. The former objection is more important. But even this can be overcome, as is demonstrated by the author's twelve cases. They may be divided into three classes : 1st. Removal of myomata with a pedicle. 2d. Myomata with a broad base without opening the uterine cavity. 3d. Those which necessitate supravaginal amputation of the uterus. About the first class there is little to be said. Intraperitoneal treatment of the stump has long been practiced, ligating it in portions or entirely by means of a clamp (Billroth Wells). For the second class the author recommends Schroeder's method of treating the pedicle, *i.e.*, to make a wedge-shaped excision of the base and bring the two surfaces firmly together by numerous superficial and deep sutures. This can be done without trouble by exercising compression of stump by means of rubber tubing. There are, however, cases in which we cannot rely upon the excision and suture, such as persistent hæmorrhage from the stump after the removal of the tubing, or anatomical obstacles, shape of the neoplasm, its extension into a broad ligament. For these, the author recommends the use of a reliable ligature, namely the elastic, which when left in the abdomen after having buried itself deeply in the tissues becomes incapsulated and harmless. This will also render unnecessary the laborious method of covering the stump with peritoneum, because the elastic ligature interrupts all circulation in it, thereby making absorption of septic material impossible. In cases of supravaginal amputation the author employs either Schroeder's method or the elastic ligature *en masse* and return to cavity without suture. He earnestly recommends, however, to remove the entire mucous lining of the cervical canal and to sew it up independently.

Of the twelve cases reported by the author, eight recovered, four died. Two from shock (which in one he attributes to the washing out of the peritoneal cavity with a solution of thymol), one from diffuse peritonitis, and one from embolism of the pulmonary artery. In two cases he used drainage and both died. In the remaining ten the cavity was closed completely. In one case the sutures were removed on the tenth day. The patient got up against orders, to go to stool, when the edges of the upper part of the wound gave way, allowing prolapse of the omentum to the size of a fist. It was cleaned and returned, and the patient recovered without further trouble.—*Obstet. Jour.*

W. T. KUDLICH.

CASE OF OBSTRUCTION OF THE INFERIOR CANALICULUS OF THE EYE BY DACRYOLITHS.—Concretions formed by the deposit of the saline elements of the tears are but rarely observed. In the *American Journal of the Medical Sciences* for July, 1882, the case of a man, aged 46, is reported which came under the observation of Dr. Henry G.

Cornwell, complaining of an interference with the escape of the tears from the left eye, which had annoyed him for ten years. An examination revealed lachrymal conjunctivitis, the lachrymal punctum slightly everted, its orifice of normal size and the walls of the canal somewhat thickened. No accumulation of tears in, or any evidence of inflammation of the lachrymal sac. Suspecting a stricture of the canaliculus this passage was slit up by means of a delicate pair of scissors, one blade of the instrument passing readily through the canal without obstruction. On the following day on attempting to separate the edges of the incision in order to prevent their union by means of Bowman's probe held vertically, the instrument struck a gritty substance which proved to be one of four dacryoliths which were arranged bead-like along the floor of the canal. The canal itself after their removal was found to be much enlarged as a result of this calcareous deposit.

AN ANALYTICAL EXAMINATION OF ONE HUNDRED CASES OF EXTIRPATION OF THE KIDNEY.—Dr. Robert P. Harris has collected one hundred cases of nephrectomy which he has arranged in tabular form and subjected to critical analysis in the July number of *American Journal of the Medical Sciences*. The relative value and safety of the abdominal and lumbar methods of operating cannot be ascertained from their respective results as shown in the table. Theoretically, the lumbar incision ought to be the safer, but much will depend upon the character of the case to be operated upon, and practicability often decides the question in favor of the abdominal incision. Where the kidney is but slightly enlarged, the costo-iliac space sufficient, and the gland moderately adherent, there can be no question that the lumbar method is safer and preferable ; but in a large proportion of cases the abdominal section is easier and safer of the two, by reason of the size and character of the tumor, and difficulties to be overcome in ligating its blood vessels.

From the record of cases given, and their numerous mishaps, it is evident that the operation of nephrectomy is still upon trial, both as to the best method of performance, and the diseased condition indicating the excision. With regard to some of the diseases of the kidney, we may say without hesitation, that the operation is demanded, and promises well, both as to the prospect of recovery, and the permanence of relief obtained.

VALUE OF CARDIO-SPHYGMOGRAPHY FOR THE DETERMINATION OF CARDIAC VALVULAR CONDITIONS AND OF ANEURISM.—The paper published by Dr. A. B. Isham on this subject in the *American Journal of the Medical Sciences* for July, is particularly valuable as an assistant to medical examiners for life insurance, indicating in a clear, practical light what assistance cardio-sphygmography is capable of yielding in medical examinations.

Every competent physician of considerable experience knows how fallacious many cases of heart murmurs prove themselves. He finds murmurs in some instances in which he is apprehensive of grave cardiac mischief, and discovers that they have disappeared, after a time, without any apparent harm surviving them. On the contrary, instances are unfortunately not wanting of supposed innocent murmurs becoming the heralders of serious cardiac disease. It is the uncertainty which even the most accomplished clinician must feel in regard to many cases presenting cardiac murmurs that makes insurance companies so chary about accepting risks in which there may be possible danger from this source. Dr. Isham thinks that, with the progress already made in cardio-sphygmography, it is perfectly practicable to distinguish the acceptable from the non-acceptable risks in almost every instance of persons coming under examination with heart murmurs. This method of investigation is new, its data, as yet, comparatively limited, but it promises to be developed until nearly every point in cardio-vascular pathology finds its interpretation by this means.

POLAILLON: TREATMENT OF UTERINE CANCER (*Annales de Gynécologie*, July, 1882)—Is considered under three heads: 1, where the disease is limited to the body; 2, where the cervix alone is involved; 3, where any radical operation is contra-indicated.

In the first case, laparotomy, after Freund's method, or else vaginal extirpation as practised by Billroth, Czerny and others, may be performed. The conclusions are that the former is far graver than the latter, though this is impracticable in cases where the uterus is too large to pass through the vagina. The chances are, however, that the patient will live longer if not operated on at all, for statistics show an almost constant recurrence, or else death takes place within a few days or hours after the operation. A case of malignant disease of the uterus is mentioned where life was prolonged five years, and the opinion expressed that, had an operation been performed, death would have sooner occurred. Where the disease is limited to the cervix, however, the indications for operation are precise. Cancer is here more malignant and runs its course in seventeen months, while, when situated in the body, about thirty-one months are required. The various operations are passed in review, and preference given to that with the galvano-cautery, for the reasons that it combines all the advantages of other methods, that there is freedom from hæmorrhage, less risk of surgical fever, almost none of septiæcmia. Secondary hæmorrhage may follow this, as well as any method. Two cases of the kind are related, followed by recovery. In general, if the operation be performed in time and with care, cure is the result.

Those cases too far advanced for any operation, claim palliative measures. These may be surgical or medical. Under the former, curetting is referred to as a "very bloody operation requiring chloroform." It is said to be dangerous and absolutely contra-indicated where the patient is weak and exhausted from frequent hæmorrhages. The medical palliative measures are the ordinary ones.—*Amer. Jour. Obstet.*

LUDWIG KLEINWAECHTER: FIBROMA LIGAMENTI ROTUNDI SINISTRI (*Zeitschft. f. Geb. u. Gynäk.*, VIII., 1.)—Winckel, in his gynæcological atlas, gives a representation of a preparation in which in each round ligament there was a myoma of the size of a bean. The preparation is considered a unicum. The author now reports a still more remarkable case. Without detail, the case was that of a woman forty-four years old, with a tumor as large as a man's head on the left side, the uterus being freely movable. The diagnosis was solid tumor of the ovary. In operating, a mass of adhesions had to be separated, and the abdominal wound enlarged to reach from pubis to umbilicus. The patient died on the fourth day.

At the autopsy, all the general organs were normal. The whole peritoneum, with the intestines, showed signs of old adhesions and recent acute inflammation. *At a distance of two and a half centimeters from the origin of the left ligamentum rotundum, there was the remnant of the pedicle, one and a half centimeters long, about as large as a lead-pencil, pale-brown, and partially dried, and with its lower end merging into the ligamentum rotundum.* The extirpated tumor was larger than a man's head, weighed 1750 grammes, and measured fifty-five centimeters in circumference. It consisted of inter-inosculating fibres of connective tissue. It is now in the pathological museum at Innsbruck. These two cases, the author claims, are the only ones known of the kind. This is sufficient excuse for the diagnosis not having been made in life. The result of the operation is explained by the size of the abdominal wound and the mass of adhesions.—*Ibid.*

WM. H. BELL: MANAGEMENT OF STILL-BORN CHILDREN AFTER RESUSCITATION (*Am. Practitioner*, July, 1882).—This article, read before the Indiana State Medical Society, is an interesting one, and opens a partially new field of treatment. The author makes the statement that out of ten infants resuscitated after having been still-born, where the work of resuscitation has lasted three fourths of an hour or over, at least six will die within two or three days unless relieved by prompt measures. Further, in all these cases death is ultimately brought about through the effect of the asphyxia the child has endured, or in other words, in proportion to the length of time the child has been deprived of the means of oxygenating its blood, will be the danger of death. Our task is therefore not finished when resuscitation is accomplished.

Why does the resuscitated infant not continue to flourish? Attention will show, and Dr. Elliot's post-mortem examinations have demonstrated, how the blood plasma, as well as the corpuscles, is influenced by the accumulation of carbonic acid, how, secondly, the functions of assimilation in the minute parenchyma of the tissues are affected, how readily extravasion occurs and whole regions are invaded by foreign products, and how the various cavities of the body with their contents may become the seat of extensive congestion and afterward inflammatory effusion. These latter lesions are what we find in most of the cases under discussion. The author details several cases to illustrate treatment. We may say in general that he applies the same rules as in older children. One important factor is sleep. The first point is to decide where the lesion is. In cranial lesions bromide of potash and tinct. hyoscyami or hydrate of chloral were administered with the idea of procuring sleep and at the same time diminishing vascular tension at the seat of injury, favoring absorption of effusion and securing rest. B. thinks that occasionally tinct. opii, oven in the head cases, may do better than the bromide. He has always found it to act well after the bromide had been given and found insufficient, and he thinks the bromide makes the opium better borne. He gives one drop of the tinct. till sleep, then one-fourth drop, as necessary. Sleep is indispensable. The early and frequent use of the warm bath is useful, and in chest and abdominal lesions a large flaxseed poultice is of the greatest benefit. Nourishment should be given early. When the pupil is contracted and the eye bright, bromide of potash and chloral may be given with confidence, and opium is contra-indicated. On the other hand, when both pupils are large and the eyes stare into vacancy, opium is beneficial.—*Ibid.*

MCKAY: EYE DISEASES DEPENDENT UPON SUPPRESSION OF MENSES

(*Am. Jour. of the Med. Sci.*, Oct., 1882).—The author reports twelve cases in which suppression of the menses was accompanied by disturbance of vision. Cases of this kind demand prompt recognition as to their etiology (before vision is too much impaired by the internal eye disease) in order that they may be successfully treated and relieved. Partial loss of vision, and inability to use the eyes in young healthy-looking females, *without external eye disease,* always suggests to his mind the probabilities of menstrual disturbances, and it is inquired about. Young school-girls often manifest asthenopia (weak and painful sight) about the time their menses are being established, and especially if their menses become irregular from any cause, which may produce partial or complete suppression for an indefinite time. Sometimes they manifest decided congestion of optic papillæ, and retinæ, and others, no internal eye-lesion, with the exception of strain of their accommodation, which is common to all these cases, for they have some refractive deformity of their eyes, which, sooner or later, causes their muscles of accommodation to rebel from their over-taxing and too continuous work. —*Ibid.*

CURRIER: EUCALYPTUS GLOBULUS IN GYNÆCOLOGICAL PRACTICE (*Am. Jour. of the Med. Sciences*, Oct., 1882).—Dr. Andrew F. Currier, of New York, reports five different cases of various natures in which the local application of this drug on vaginal tampons proved of the greatest anæsthetic value. Beside its anæsthetic effects, it is, as we know, antiseptic and antiperiodic, and hence it will be of use in that large class of cases where foul-smelling discharges exist, and also as an adjuvant in the treatment of malaria. The absorptive function of the vaginal mucous membrane has been comparatively little employed in constitutional treatment, and this is a field which yet remains to be worked up. A daily application of this substance must have more than a local influence. It will usually be difficult to give treatment so frequently, excepting in hospital practice. Much better results would follow could a continuous effect of this, as well as of some other means of treatment be obtained, but the expense and the annoyance, and, in many cases, the dread of pain prevent.—*Ibid.*

ANGUS MACDONALD (Edinburgh): OBSTETRICAL SOCIETY PAPERS, 1880—'81.—This contains the following papers: 1. *Report of fourteen cases of completed ovariotomy;* 2. *Two cases of chronic inversion of the uterus;* 3. *Quarterly report of the Royal Maternity and Simpson Memorial Hospital;* 4. *Calculus in the female bladder.* The cases of ovariotomy revealed nothing unusual, either as to the operation or the after-treatment. Only two of them were fatal. In most of them the pedicle was clamped, then cauterized, then tied with a Chinese silk ligature, and returned to the abdominal cavity. It would seem to us that the drainage-tube was used on several occasions where it might have been dispensed with, as it adds an additional element of danger, aside from the good which it may do. [The usefulness of the ordinary glass drainage-tube in the majority of cases is questionable, to say the least.]

It is perhaps hardly fair to criticise the author's use of the tubes, for a published report of a case does not produce the same impression which one will get at the operating table. In addition to looping the ligatures, and tying the pedicle in two sections, a mass-ligature was also used, which can do no harm, and may prevent a fatal accident. It is to be hoped that its use may become general. The tumors were, in most of the cases, small and not difficult of removal. The anæsthetic used was a mixture of ether and chloroform. Some remarks follow the histories, particularly with reference to the diagnosis of ovarian tumors. It is necessary to differentiate them from pregnancy, fibroids, renal cysts, ascites, hydatid cysts of the liver, hysterical abdominal distention, tumors of the omentum, encysted peritonitis, etc. An exploratory incision alone will settle the diagnosis in some cases. The author is in favor of strict antiseptic precautions, including the spray.

Two cases of chronic inversion of the uterus. The first case was of seven months' standing, and three prolonged attempts were necessary to restore it to its normal position. The patient was relieved of the severe hæmorrhages which had occured while she was suffering from the inversion, the womb resumed its normal condition, and, in a short time, the patient was impregnated. The second case was of five and a half years' standing. Hæmorrhages, in this case, had reduced the patient to an extremely anæmic condition. The first attempt at reposition was accompanied by an oblique rupture of the vagina two inches in length. At the second attempt, the posterior wall of the cervix was ruptured, and the inverted body was forced into abdominal cavity. The only way of remedying the trouble was by amputating the uterus, which was accordingly done, and the patient made a good recovery. The diagnosis of this accident is important. It is very likely to be mistaken for polypus, but the inverted uterus bleeds more readily and is more sensitive than a polypus. If the sound can be made to pass two and a half inches or more, the patient is probably suffering from a polypus. If the uterus be inverted, it will, of course, not be found in its normal position behind the symphysis; instead of this, by forcing the fingers downward, the characteristic cup-shaped depression will be recognized. [One other test which we have seen illustrated practically by Dr. Thomas, consists in cutting into the tissue of the tumor with scissors. If the tissue be that of the uterus, the wound can be closed, otherwise one will feel perfectly secure in removing the tumor.] The author thinks it well to adopt preparatory treatment before completing the reduction, in the hope of overcoming, to a certain degree, the tension of the constricting ring, which is the area of greatest resistance. Sudden and forcible reposition is likely to be followed by shock, which may prove fatal. Amputation is the final resort, should all attempts at reposition prove unavailing.

We also make a few extracts from Dr. Angus Macdonald's clinical lecture on *lacerations of the cervix uteri*, as published by the *Edinburgh Medical Journal* for July, 1882. He thinks that the great majority of lacerations of the cervix, vagina, and perineum occurring during labor are not unnatural, and that they will heal spontaneously. He admits, however, that operations upon the cervix for the remedying of laceration are warranted as frequently as they are for the perineum, and are likely to produce as good results. He also thinks that operation upon the cervix is the easier of the two, in which view there are many who will differ with him. He even approves of operation when the injuries to the cervix and their results are "of a minor degree." Operation at the time the accident occurs he does not recommend.

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ANGUS MACDONALD (Edinburgh): OBSTETRICAL SOCIETY PAPERS, 1880—'81.—This contains the following papers: 1. *Report of fourteen cases of completed ovariotomy;* 2. *Two cases of chronic inversion of the uterus;* 3. *Quarterly report of the Royal Maternity and Simpson Memorial Hospital;* 4. *Calculus in the female bladder.* The cases of ovariotomy revealed nothing unusual, either as to the operation or the after-treatment. Only two of them were fatal. In most of them the pedicle was clamped, then cauterized, then tied with a Chinese silk ligature, and returned to the abdominal cavity. It would seem to us that the drainage-tube was used on several occasions where it might have been dispensed with, as it adds an additional element of danger, aside from the good which it may do. [The usefulness of the ordinary glass drainage-tube in the majority of cases is questionable, to say the least.]

It is perhaps hardly fair to criticise the author's use of the tubes, for a published report of a case does not produce the same impression which one will get at the operating table. In addition to looping the ligatures, and tying the pedicle in two sections, a mass-ligature was also used, which can do no harm, and may prevent a fatal accident. It is to be hoped that its use may become general. The tumors were, in most of the cases, small and not difficult of removal. The anæsthetic used was a mixture of ether and chloroform. Some remarks follow the histories, particularly with reference to the diagnosis of ovarian tumors. It is necessary to differentiate them from pregnancy, fibroids, renal cysts, ascites, hydatid cysts of the liver, hysterical abdominal distention, tumors of the omentum, encysted peritonitis, etc. An exploratory incision alone will settle the diagnosis in some cases. The author is in favor of strict antiseptic precautions, including the spray.

Two cases of chronic inversion of the uterus. The first case was of seven months' standing, and three prolonged attempts were necessary to restore it to its normal position. The patient was relieved of the severe hæmorrhages which had occured while she was suffering from the inversion, the womb resumed its normal condition, and, in a short time, the patient was impregnated. The second case was of five and a half years' standing. Hæmorrhages, in this case, had reduced the patient to an extremely anæmic condition. The first attempt at reposition was accompanied by an oblique rupture of the vagina two inches in length. At the second attempt, the posterior wall of the cervix was ruptured, and the inverted body was forced into abdominal cavity. The only way of remedying the trouble was by amputating the uterus, which was accordingly done, and the patient made a good recovery. The diagnosis of this accident is important. It is very likely to be mistaken for polypus, but the inverted uterus bleeds more readily and is more sensitive than a polypus. If the sound can be made to pass two and a half inches or more, the patient is probably suffering from a polypus. If the uterus be inverted, it will, of course, not be found in its normal position behind the symphysis; instead of this, by forcing the fingers downward, the characteristic cup-shaped depression will be recognized. [One other test which we have seen illustrated practically by Dr. Thomas, consists in cutting into the tissue of the tumor with scissors. If the tissue be that of the uterus, the wound can be closed, otherwise one will feel perfectly secure in removing the tumor.] The author thinks it well to adopt preparatory treatment before completing the reduction, in the hope of overcoming, to a certain degree, the tension of the constricting ring, which is the area of greatest resistance. Sudden and forcible reposition is likely to be followed by shock, which may prove fatal. Amputation is the final resort, should all attempts at reposition prove unavailing.

We also make a few extracts from Dr. Angus Macdonald's clinical lecture on *lacerations of the cervix uteri*, as published by the *Edinburgh Medical Journal* for July, 1882. He thinks that the great majority of lacerations of the cervix, vagina, and perineum occurring during labor are not unnatural, and that they will heal spontaneously. He admits, however, that operations upon the cervix for the remedying of laceration are warranted as frequently as they are for the perineum, and are likely to produce as good results. He also thinks that operation upon the cervix is the easier of the two, in which view there are many who will differ with him. He even approves of operation when the injuries to the cervix and their results are "of a minor degree." Operation at the time the accident occurs he does not recommend.

[It would seem to be very difficult, often impossible, to operate at such a time. After a woman's labor is ended, it would be far more difficult to get her ready for closing a cervical tear than for passing a few sutures through a lacerated perineum. If the woman were greatly exhausted, which would be quite likely after a labor which had resulted in this lesion of the cervix, the operation would certainly be contra-indicated. Hæmorrhage from a ruptured cervical artery is about the only condition which would induce us to the operation at this time.] The author was converted to a sense of the utility of Emmet's operation, by the fact that a patient with lacerated cervix was treated by him for a long time ineffectually with astringents and tonics. Passing from his hands into those of a Boston gynæcologist, Emmet's operation was performed, and the woman recovered her health. Twelve cases are cited in which the operation was performed by the author, and in all of them good results were obtained. The symptoms attending laceration of the cervix are so well known, and have been referred to so often, that it is hardly worth while to repeat them here. The author thinks that this operation should succeed the old methods of treating so-called hypertrophy of the lips of the cervix, which is in reality the eversion consequent upon lateral lacerations. These methods included active caustics and, perhaps, amputation of the lip. The method of performing the operation is described at length, and is essentially as described by Dr. Emmet in his Principles and Practice of Gynæcology.—*Ibid.*

RETRO-UTERINE HÆMATOCELE.—The following is an abstract the *Medical Press and Circular* publishes of a clinical lecture by Prof. C. Braun von Fernwald, which appeared in the *Wien. Med. Zeitung*.

Since the time of Nélaton has been understood by this expression a collection of blood in Douglas' space, which is supposed to arise by the menstrual blood being emptied into the peritoneal cavity instead of into the uterus. Known to the elders under the name of *suppressio mensium*, this affection, which is often dangerous to life, is deserving of the greatest interest, as it is one that may offer itself for treatment in the practice of any physician. Parametritic exudation and extravasion of blood into the peritoneal cavity are mostly met with in sterile women, and such as have not borne offspring for a lengthened period. Two forms are distinguished, intra and extra-peritoneal hematoceles, of which the former are much more frequent. In opposition to the opinion of the French observers, hematoceles must not always be associated with extra-uterine pregnancy; but as this frequently is the case, the breasts should always be examined for milk, and the genitals for the blue coloration indicative of pregnancy. A positive condition may here be determined with tolerable ease, but the determining of one that is merely negative is often difficult; for instance, that the hæmatocele in a given case is not dependent on extra-uterine pregnancy.

In proof of this, Prof. Braun related a case in which he was consulted by a "homœopath." The patient was prostrated by violent abdominal pains, and she had a tolerably large elastic tumor in the lower part of abdomen, concerning which he expressed the opinion that, in case it merely retained its size, or actually became smaller, it would prove to be a blood extravasation; if, on the other hand, it increased in volume, it would prove to be an extra-uterine pregnancy. The physician in charge would not admit the second possibility, on the ground that the husband had been impotent for ten years, and that the wife was of a respectable family. Notwithstanding this, the tumor gradually increased in size, and in a month's time colostrum could be pressed out from the nipples. The patient's condition became rapidly worse. The professor was once more called in, but could do no more than pronounce the case hopeless. Death took place from hæmorrhage into the peritoneal cavity from rupture of a blood-vessel while the patient was in a hot-bath.

Examination *post mortem* revealed the fact that extra-uterine pregnancy existed, and, moreover, that the pregnancy was double; there were twins.

Hematocele is indicated by the following: Menstruation is generally painful, accompanied by malaise and shiverings; frequently the menstruation ceases suddenly. The patient suffers from shock, and in consequence of internal hæmorrhage the skin and mucous membrane become blanched. If the course of the affection be unfavorable the patient becomes collapsed, the tumor presses upon the bladder, the ureters become sharply flexed, and death supervenes. If, on the other hand, the course be favorable, the extravasation becomes encapsuled, and an elastic tumor is then to be felt with ease, both from the vagina and from the rectum. The folds of Douglas are in no other disease depressed so much as in hæmatocele and extra-uterine pregnancy. The two affections cannot, however, be distinguished one from the other for the first three months—three months after the cessation of the menses—and it is only afterward that the slow growth of the tumor allows the conclusion to be drawn that the case is one of abdominal pregnancy.

For the differential diagnosis of retro-uterine hæmatocele from ovarian cyst Prof. Braun notes the following: First, the contour of a hematocele is not sharply defined on its upper border. Second, notwithstanding its fluid contents, it always gives a tympanitic sound on percussion, for the reason that the coils of intestine, in consequence of the peritonitis that accompanies every case of hæmatocele, are intimately united to it. Both these peculiarities are absent in ovarian cysts.

The treatment consists in absolute rest in bed, prohibition of cohabitation, application of ice to abdomen, and enemata of cold water. Care must be taken that the bowels and bladder are properly relieved, and if there are no grave complications, resorption of the blood will bring about recovery within three or four weeks. In severe cases, in which fever and pain are very persistent, and there is reason to fear the rupture of a possible abscess into the abdominal cavity, the tumor should be punctured through the vagina as recommended by Nélaton. If there is any suspicion of extra-uterine pregnancy, however, Prof. Braun would caution against puncturing, as it might easily set up profuse suppuration, to which the patient might eventually succumb.—*Obstet. Gaz.*

VEGETATIONS OF THE ENDOMETRIUM.—William Goodell, M.D.—The patient was a woman sixty-eight years of age, with the following history: She had had twelve labors at term and two miscarriages, fourteen children in all, including two twins. Her menses ceased when she was forty-five. Four years later she came to this country from Ireland, and within six months after began to loose blood per vaginam. The hæmorrhage was checked at that time by the attending physician removing some bleeding tumors. She continued well until three months ago. On digital examination, it was found that the cervix had been torn in one of her labors. There existed eversion; an ectropion of the mucous lining of the cervix not sufficient, however, to account for the hæmorrhage; and the hand above the pubes could distinctly feel a tumor which might be the cause. The sound shows the uterus retroverted, but perfectly movable. The size of the womb, and amount of blood, shows there must be something wrong within the cavity. The treatment consisted in the use of a curette. The author prefers the blunt to the sharp curette, there being no danger of wounding the womb with the blunt instrument. After removal of the growths, application of the strong tincture of iodine in the uterine cavity is recommended.

The tumor above the pubes was thought to be ovarian. Whether the tumors removed were malignant or not, could only be determined by the microscopic examination. The internal treatment consisted of tr. ferri chloridi ʒ iv; acidi phosphorici f. ʒ vi.; spr. lemonis ʒ ii.: syr. simpl. f. ℥ vi.

The uterine growths most frequently met with are fungous degenerations of the endometrium, benign, and due mostly to over-nutrition, caused by retroversions or flexions, interstitial sub-mucous fibroids, lacerations of the cervix, etc. The next most common, is a villous degeneration, invariably fatal. This form is likely to grow in polypoid masses, and having no capsule, breaks down under traction; it is easily determined by the microscope. Cancer of the cervix uteri is found, almost without exception, in women who have borne children, it usually resulting from a cervical laceration. Malignant growths of the endometrium are usually found in old maids, and sterile married women.—*College and Clinical Record.*

ACUTE GRANULAR VAGINITIS. — Paul F. Mundé. The patient, a married woman aged 51, complained of a profuse greenish discharge, and itching around the vulva.

On examination the vagina was found covered with little spots the size of a pea, which bled on the slightest touch.

The profuse discharge, the great hyperæmia, and the desquamation of the epithelium, in a woman past the menopause, was surprising. The vaginitis was supposed to be gonorrhœal. It may, however, arise from excessive coition, pessaries, irritating injections, and cold.

The treatment consists in applying a solution of nitrate of silver from 5—60 grains to the ounce to the vagina, then pass in a tampon covered with vaseline, to keep vaginal walls apart. The next day an injection of carbolic acid ʒ ss., sulph. zinc and borax one one ʒ each, is to be used three times a day. Three days after a weaker solution of nitrate of silver is to be again used, followed next day by the carbolic acid solution, which in turn is to be followed on the third day by a still milder nitrate of silver solution. This alternate use of nitrate of silver and the carbolic acid solution, is to be continued until the mucous membrane becomes pale, and the discharge white; it is then to be stopped, and the vaginal walls painted with glycerol of tannin, one part to four, after which the tampon is to be again inserted.—*Western Medical Reporter.*

A NEW METHOD OF RENDERING SPONGE TENTS ASEPTIC.—Since the introduction of laminaria and tupelo tents and the method of rapid dilatation, sponge tents have been used much less frequently than formerly. The profession gladly welcomed any means of dilating the uterus unattended with the putrefaction and its attendant dangers which so frequently follows the use of sponge. Experience, however, has shown that for certain purposes we possess in sponge, used as a dilator, a therapeutical agent which cannot be replaced by any of the other methods of dilatation. Such conditions are chronic inflammation of the uterus, body or cervix, and the soft, flabby condition of subinvolution. In such conditions the hyperæmia, softening and serous infiltration of the uterine tissues induced by the dilating sponge tent, are followed by a stimulation of the absorption process to such an extent as greatly to reduce the size of the organ. No method hitherto employed to render sponge aseptic, such as by the use of carbolic acid, has succeeded in preventing the frightful stink of the sponge-tent when removed. This, however, was attained to some extent by Dr. Albert Smith of Philadelphia, by greasing slightly the sponge tent and then coating it with finely powdered salycylic acid. This experience of Dr. Smith suggested a similar employment of iodoform to Dr. Ernest Frænkel, private docent at Breslau. He took the ordinary cerated sponge-tents, rubbed them well with salicylated cotton, and then coated them from base to apex by rolling them in iodoform. He then filled the vagina with tampons of iodoform gauze made by Kahnemann and Krause of Vienna. When the tents were removed eighteen or twenty hours later, there was absolutely no offensive odor, and particles of the iodoform were still to be seen in the cervical canal and adhering to the sponge tents. The method can be used just as well with laminaria and tupelo tents as sponge, and preliminary anointing of the tents with carbolated or borated vaseline will probably be better than with simple cerate. I can testify from recent personal experience how completely free from putrefactive odor a sponge tent thus treated is, when removed from the cervix where it has lain for twenty-four hours.—*Canada Journal.*

MARTIN (Berlin): DRAINAGE IN PERITONEAL OPERATIONS.—Number 219 of that excellent collection of essays, issued under the direction of Volkmann, of Halle, is by Dr. A. Martin on "Drainage in Peritoneal Operations." He opens with a tribute to the antiseptic method, by means of which abdominal surgery has been, so to speak, legitimized. Sims first suggested the advisibility of drainage in the peritoneal cavity in 1872, as the rational means of disposing of poisonous accumulations after ovariotomy. Olshausen and Nussbaum were the first to employ it in Germany, but it soon fell into disfavor and disuse, at least as a prophylactic. Bardenheuer re-introduced it in 1879, his argument being the ready absorbability of the peritoneum, more especially of septic fluids, and the possibility of removing them by means of tubes carried through Douglas' pouch into the vagina. Martin differs with him as to the necessity of drainage, and rightly rejects the appeal to experiments upon the lower animals, which he considers inconclusive as to the susceptibility or non-susceptibility of the human peritoneum under similar tests. That drainage is often unnecessary is shown by the experience met with in cases where cysts have ruptured into the peritoneal cavity, their contents being quickly absorbed without harm to the patient; also in cases of ovariotomy, where more or less of the sac has been left on account of firm adhesions, the patients recovering without septicæmia; further, in cases where active inflammation was going on at the time of operation, in which the quantity of secretion poured out has not exceeded the resorptive power of the serous membrane. Should the resorptive power be deficient, then it is his opinion that neither drainage nor any other therapeutic measure will save the patient. Bardenheuer claims that drainage is most useful, if not indispensable, in those cases where extensive surfaces have been denuded of peritoneum in the removal of tumors. Martin treats such conditions by drawing the wounded edges of the peritoneum together with sutures, after which healing quickly takes place. As a result of his experience, he concludes that the *quantity* of fluid poured upon the peritoneum matters little, if only there is no objection as to its quality. If the material is not septic and contains no elements of irritation, and if irritating material were not introduced at the time of the operation, then the peritoneum will absorb almost everything which is absorbable, while the remainder will either be encapsuled, or will be removed by the intestines or by some other channel. Drainage opens doors to infection which were previously closed. The key to success must lie in taking proper precautions to prevent the entrance of infectious materials. The author thinks this is best accomplished by full Listerism, including the spray. It must be remembered, however, that no precautions at the time of the operation can remove baneful influences which are not removed by the operation *per se;* likewise that that class of cases deserves special consideration in which the peritoneum is brought into contact with the vagina; in both these cases he considers drainage a useful prophylactic measure. Under the first heading may be cited extra-uterine pregnancy and extra-peritoneal accumulations, whether of blood or of pus. Under the second may be considered the operation for extirpation of the uterus. Bardenheuer's method of drainage consists in securing a catgut net over the entrance to the true pelvis, which forms a support or floor to the intestines. The secretions, if any, from above the net, will drain through its meshes, and below the net there is no obstruction to the drainage through the opening in Douglas' cul-de-sac. Martin approves neither of this plan nor of Hegar's use of tubes placed in the abdominal wound, whether acting upon the principle of capillary attraction or of some other. He regulates his plan according as there is a cavity to drain, or as provision is to be made against mishap from sutures and ligatures. In the first instance, the cavity is to be carefully isolated from the peritoneal cavity (as in the case of the sac of an extra-uterine pregnancy) and the drainage tube or tubes are to be carried through the vagina into Douglas' cul-de-sac. In the second, the abdominal wound is to be closed, and the drainage effected as in the first case. During the year 1881, this plan was carried out in four cases of the first variety, all of which had a successful issue. It was also tried in twenty-two cases of the second variety, the uterus being extirpated for malignant disease in all but one of them, this being a case of very exaggerated prolapse. The tubes used were thick rubber ones with cross-pieces. Twenty-four hours after the operation had been performed, a weak solution of tepid carbolized water was injected, and this was repeated frequently when the temperature showed a tendency to rise. A light tampon of salicylated cotton or iodoformed gauze was placed in the vagina and this answered the double purpose of an antiseptic agent and a support for the tube. The tube usually came away in from eight to ten days. In two weeks later, the opening in the floor of the pelvis was usually closed. Secondary drainage is apt to be fruitless, and drainage at any time is to be avoided if possible, "since it adds an unnecessary complication to conditions which are otherwise simple, and militates against the after-treatment by rendering infection through the tube possible."—*Amer. Jour. Obstet.*

B. SANGER (Leipzig): ON THE RESTORATION OF THE CLASSIC CÆSAREAN OPERATION, TOGETHER WITH AN ADDENDUM TO THE HISTORY OF THE UTERINE SUTURE IN THAT OPERATION.—Sänger considers himself fortunate in arriving at similar conclusions with Kehrer upon this subject, these being reached by each independently of the other. Both oppose the Porro operation, in so far as it is intended to supersede the ancient one; both admit the great advantages of antiseptics, of a suitable uterine suture, and of drainage of the uterus and of the abdominal cavity in connection with this operation. Sänger prefers a longtitudinal incision in the middle third of the uterus, Kehrer chooses a cross-section in the lower uterine segment, following the example of Lebas who was the first to propose to sew up the wound of the uterus in 1769. Lauverjat followed the same method, beginning his operations in 1788. The external incision recommended by the latter was a diagonal one; its lower point being at the external border of the rectus abdominus muscle. Physick proposed a transverse cervical incision, in such a way as not to cut the peritoneum. One argument of Kehrer for choosing the lower uterine segment for his incision is, that he is less likely to meet the placenta in that situation, and therefore will have the minimum of hæmorrhage; but Sänger contends that by compression of the uterus, and by the use of sutures and ligature, this accident need not be feared. 2. Kehrer claims that with the uterine incision which he employs (tiefer Querschnitt) a shorter abdominal incision is required, which is considered questionable by Sanger, his idea being that this incision should be carried well toward the symphysis to avoid wounding the bladder, and also to make the uterus more accessible. He thinks the incision should be long enough to enable the operator to draw up the emptied uterus and pass the sutures without interference from the abdominal walls. He lays stress upon the immediate stopping of any hæmorrhage which may take place from the edges of the abdominal wound, by the use of compression forceps or serre-fines. 3. It is claimed that with the horizontal incision extraction is easier and safer, especially if there be a head presentation; likewise that there is less danger of spasmodic contraction of the uterus about the head than when the longitudinal incision is used. Sänger would obviate the latter by carefully cutting down over the fœtal head, and extracting quickly, enlarging the uterine opening with a blunt pointed bistoury in case laceration seems imminent. 4. Kehrer places great weight upon the loosening of the peritoneum in the vicinity of the internal os, in order that the edges of the peritoneal wound may be brought together more readily. Sänger recommends the following steps for the operation: *a*, Transverse division of the peritoneum at the border line of the vesico-uterine excavation;

b, Transverse division of the cervical tissue, partly with the knife, and partly with the finger ; *c*, Disengagement of the fœtus, and delivery with the forceps if necessary ; *d*, Ligation of bleeding vessels ; *e*, Suture of the cervical tissue, and over this the peritoneal suture ; *f*, Application of a drainage tube through the uterine and abdominal wounds. If the diagonal abdominal incision be adopted instead of the longitudinal, he advises the complete closure of the wounds, and the application of the drainage tube to the uterus and the vagina. 5. If the transverse incision in the lower uterine segment be made somewhat higher than Kehrer recommends, then less caution will be required lest the opening be too small for the extraction of a mature fœtus, and there will also be less danger of opening large veins in the vicinity of the internal os. 6. If Frank's method of bringing together the round ligaments, and fastening them to the abdominal walls be employed, the deep transverse division of the uterus would be preferable to this extent, that the incision would not be carried beyond the points of origin of those ligaments. Since the uterus may be considered a hollow muscle, the incision should take a crescentic shape, with the convexity upward, rather than that of a straight line. Cases where it would seem to be preferable to make the uterine incision a longitudinal one in the middle third of the organ are : 1. Those which are complicated with tumors, for example fibromata, which have invaded the cervix and the lower segment of the uterus. The same would obviously be true in cases where the deep inferior incision would be contra-indicated on account of carcinoma of the cervix. 2. Where the body of the uterus alone is free on account of firm deposits due to pelvic peritonitis. 3. Where the deep transverse incision has been made at a previous operation. 4. Where there is a deep insertion of the placenta. 5. Where the inferior uterine segment has a breadth of less than fifteen centimeters. 6. Where, for any other reason, the inferior uterine segment is difficult of access. The incision above referred to, corresponding with an abdominal incision in the median line, is the most convenient for the operator, and this advantage, together with that which is afforded by a suture which will close every gap in the uterus, will insure speedy union by first intention. The suture used is composed of a double series of stitchers similar to the one which Czerny employs in resections of the intestine, and is also similar to Schröder's *Etagennaht*, which he uses upon the stump after supra-vaginal amputation of the uterus. Sänger considers it to be very important that the decidua be not included in the suture, lest the lochia percolate through the wound and prevent healing. The supplement to this paper is mainly historical and casuistic, and does not require further notice at this time.—*Ibid.*

BREISKY (Prague) : THE INTERRUPTION OF PREGNANCY BY ARTIFICIAL MEANS. — This subject has received comparatively little attention of late years, owing both to the absorbing interest which gynæcologists have taken in the surgery of their specialty, and likewise to the fact that the old methods and indications concerning this operation are looked at somewhat askant in the light of present knowledge. Spiegelberg investigated the subject in 1869, and in his statistical tables showed that the results after such interference were quite unfavorable. Sources of error in these tables were pointed out at a later period by

Litzmann and Dohrn, their statements being based upon the experience of well-known physicians of large practice. [The operation is referred to as being indicated mainly in cases of malproportioned pelvis, an evil with which we fortunately have little to do in this country.] The influence of Spiegelberg's statements was widely felt notwithstanding their errors, and they were corroborated by the author's experience, for he had lost four mothers and eight children out of twelve cases where the operation had been performed. The indications for interference with pregnancy are grouped under curative and prophylactic headings. In the first class may be mentioned cases, 1st, where the uterus is retroverted or prolapsed, and immediatly constricted ; 2d, those of excessive dropsy of the amnion which causes unbearable inconvenience and distress, usually in the fifth or sixth month ; 3d, cases of mola hydatidosa. In cases of this kind, excessive hæmorrhage may be present. 4th, Cases in which the fœtus has died, with the evils consequent upon such a mishap. When this fact has been ascertained, there is sufficient necessity for action, without waiting for the efforts of nature to overcome the difficulty. 5th, Where disease on the part of the mother becomes of so serious a nature that it, together with the complication which pregnancy affords, places her life in jeopardy. As illustrations of this may be cited, hyperæmesis, chorea, pernicious anæmia, and nephritis. The curative indications for artificial abortion, after viability has become established, can be observed from two points of view, first, there will be a mild relief from pressure, that is to say, the uterine tumor, by its mechanical action, may have started a train of symptoms which will lead to a fatal result unless quickly relieved ; second, the child being viable, an abortion may result in saving its life, when this might not be possible should the pregnancy extend to term. In cases where hemorrhage is violent, and it may be of frequent occurrence, the indication for interference is manifest. As to prophylactic indications, they are chiefiy concerned in interference during the latter months of utero-gestation (künstliche Frühgeburt). Where there is a high degree of pelvic deformity and the patient is in good health, the author is in favor of Porro's operation, rather than any attempt at delivery through the natural channels. If the person should not be in good health when interference is demanded, and the above-mentioned conditions of deformity obtain, then the alternative will be between artificial abortion and the Cæsarean section, the former of which is the author's preference. Other conditions which would call for such interference on account of narrowing of the natural passages, are tumors of various sorts. Cancer of the cervix is not included under this head, but rather fibro-myomata, sessile dermoids, or inextricable growths developing from the pelvis. While consideration for the mother is usually of first importance where interference is required, there are also cases where prophylactic interference is justified in behalf of the child. An example of this is in cases where the mother has habitually given birth to dead children at term, which might possibly have been delivered alive at an earlier period. Spiegelberg's convictions upon the entire subject of artificial abortions were such that he counselled the limitation of the procedure to patients with narrow pelves. The chief danger to be feared after the operation is septic infection. In any case of artificial abortion, difficulties are possible on account of defective disposition of the fœtal parts. The author gives plates showing the possibility of the conversion of the normal fœtal ovoid shape into an abnormal round or ball-like form (kugelige Gestalt). Severe cramps are often experienced by the patient, which Shröder thinks may be due to a collective or concrete tonic spasm of the uterus. Labor is to be brought on in most cases by puncture of the amniotic sac. Some obstetricians prefer to separate the decidua from the uterus by means of an antiseptic injection. A hollow carbolized laminaria tent will also accomplish the purpose. —*Ibid.*

BROUARDEL, BUDIN, TARNIER: REPORT CONCERNING THE NEW MATERNITY HOSPITALS IN PARIS.—The well-known facts concerning the liability of puerperal women to disease, and especially to those of a septic character, are recited, and the theory that septicæmia should always be the result of a putrid fermentation caused by septic vibriones, is expanded. Hence the necessity of isolating such patients from all influences of a poisonous character. The Commission visited the maternity of the hospital Tenon, the pavilion for isolation of the hospital Lariboisière, the new clinique d'accouchements, the Maternity of Paris, and the Pavilion Tarnier, the last-mentioned being an adjunct of the Maternity of Paris. With all these hospitals excepting the last, serious fault is found by the Commission, on account of improper ventilation, deficient cleanliness, imperfect surveillance over and isolation of the patients, etc. The Maternity of Paris is more properly an infirmary or hospital, while the confinements take place in the Pavilion Tarnier, which is a brick building in the garden attached to the hospital, and of some distance from it. The hospital was formerly the Abbey Port Royal. When M. Trelat took charge of the maternity service in 1864, its mortality was the highest of any maternity in Paris. His reforms, chiefly in the direction of ventilation, lowered the yearly mortality from twenty per cent to six per cent. In 1867, M. Tarnier assumed charge, and in 1870 he secured the erection of the Pavilion Tarnier, where all the deliveries take place, and the average mortality is two per cent. The description of the building is given at length in Tarnier and Chantreuil's Traité d'Accouchements. The antiseptic method is strictly carried out, each patient has a separate room, and, in case of severe illness, a separate nurse. The interne is not allowed to make autopsies. The bed is made of plates of elastic metal, the stuffing of the mattress is of a cheap material (oaten straw) which is burned after it has been used by a single patient, and all the contents of the room are thoroughly disinfected as soon as it is vacated. The pavilion has two stories, with four beds upon each story. There have been twelve hundred and twenty-three confinements in it, with only six deaths. The conclusions of the Commission were: 1. Puerperal fever, puerperal infection, puerperal septicæmia, are eminently contagious. 2. The contagion is communicated by other persons, by dressings, by instruments, and by the surrounding atmosphere. 3. In order to prevent these causes of contagion, the buildings in which women are confined should be rigorously separated from the general hospital buildings. 4. The confined women should be isolated for at least six days after their confinement. Emergent cases of a suspicious character should be isolated in special buildings. 5. There should be a separate medical staff for the maternity, distinct from the staff of the infirmary. 6. The maternity staff should make neither autopsies, dissections, anatomical preparations, nor surgical dressings. 7. Antiseptic precautions should be followed. 8. The lying-in buildings should be isolated, should contain only a small number of beds each, with one bed to each room, and an abundant supply of fresh air. 9. The location of the maternity should be eminently salubrious. 10. Each maternity should be provided with a disinfecting stove.—*Ibid.*

LUCAS CHAMPIONIERE: THE ARTIFICIAL ALIMENTATION OF NEW-BORN INFANTS (*Archives de Tocologie*, October, 1882).—In 1877, the Academy of Medicine proscribed artificial nourishment for the newly born. This seemed an unreasonable procedure to the author. Mother's milk is the natural nourishment, but it is not always possible to get it, and almost universal experience demonstrates the possibility of rearing children upon a prepared diet. The experiments of MM. Tarnier and Parrot upon the milk of the cow, the goat, and the ass, for little children, were made by each independent of the other, but the conclusion arrived at was identical with both, namely, that the milk of the ass most resembled that of the human female, and was its best substitute, given either from a bottle, or by placing the infant at the udder of the animal. Practically, the author says, it would be difficult to obtain a great supply of these animals, the cost would be greater than that of wet nurses, and suckling would be limited to the day time. The literature concerning artificial nourishment is abundant enough, but poor in quality, for the most part. The necessity of supplying warmth to the body is greater with those children which are artificially reared than with those who nurse at the breast. Insufficient protection in this regard leads to digestional disturbances—vomiting and diarrœha. An additional supply of warmth, with no change in the milk, resulted in relief in many cases which were seen by the author. Woollen or flannel wrappings are better for children than cotton wadding; for, in the first place, the child generates but a small quantum of heat, and, in the second place, the wadding is a non-conductor, and thus prevents the accession of heat from without. A child wrapped in wadding may be cold though lying between two bottles of hot water. An excellent adjuvant to artificial alimentation is alcohol in the form of brandy, cherry water, or rum. Especially is this useful for children which have been born prematurely. Too frequent baths are also a source of injury, from chilling of the body, as well as from irritation of the skin. The temperature of the water for the bath should be a matter of careful attention, and should be rather cool, and applied quickly. Plenty of starch powder and plenty of dry woollen clothing are the best preventives against irritation of the skin, if the child is to be fed upon cow's milk, diluted with half its quantity of water and sweetened with sugar. [As to frequency of giving nourishment, the author fails in explicitness upon a subject which is of great importance. Jacobi's remarks upon this entire subject of artificial feeding (Die Pflege und Ernährung des Kindes, in Gerhardt's Handbuch der Kinderkrankheiten) will be found to be most interesting and profitable.] Boiled milk is preferable to any other form, chiefly because it is the safest, and most likely to be free from germs of disease. Concerning concentrated forms of milk, Liebig's is to be avoided. Artificial foods are to be handled cautiously, as their aim is to displace milk. Their expensiveness is also an element of objection. For nursing bottles, he recommends those of Robert or of Monchovant. Black rubber tubes are the best for the bottles, and the suction should be perfectly free. Above all things, the bottle should be kept scrupulously clean, and the occasional use of a little boracic acid in cleansing it will be of advantage.—*Ibid.*

V. H. TALIAFERRO (Augusta, Ga.): THE APPLICATION OF PRESSURE IN DISEASES OF THE UTERUS, OVARIES, AND PERI-UTERINE STRUCTURES (*Atlanta Medical Register*, September, 1882).—He states that he read before the Medical Association of Georgia, in April, 1878, a paper entitled "The Application of Pressure in Diseases of the Uterus," in which the curative effect of the pressure of the cotton tampon was described. Its object was stated to be the relief of congestion and disordered local nutrition, and the breaking down and absorption of inflammatory deposits, to be followed by the use of the pessary if necessary. This treatment should be accompanied by the hot vaginal douche treatment, as advocated by Emmet, and the latter is indicated in preference to the former when a patient is suffering from an acute attack of inflammation in the pelvic organs. The author then continues to dispute Dr. Bozeman's claim to priority in the use of the cotton tampon, his paper upon the subject having appeared at the meeting of the American Gynæcological Association in September, 1878, five months after the presentation of Dr. Taliaferro's. So far as the matter of priority of publication is concerned, the question seems to be settled; and it is not necessary to refer to the unpleasant allusions to Dr. Bozeman which the author makes. He advocates the knee-chest position as the only one in which the tampon should be applied. The vagina is to be distended by the tampon in all directions, and the latter should extend only to the vaginal outlet. In the words of the author, "the vaginal orifice should close over the filling." The advantages which he claims for the tampon are: it does not reach the urethra nor press uncomfortably upon the bladder and the rectum; it does not interrupt the physiological mobility of the uterus; and it stays in position better than the more extensive tampon.—*Ibid.*

E. H. NOBLE (Augusta, Ga.): ABORTIVE TREATMENT OF MAMMARY ABSCESSES AND THE CURE OF FISSURED NIPPLES BY MEANS OF A NEW AND EFFECTUAL COMPRESS (*Atlanta Medical Register*, October, 1882).—The compress may be made of ordinary cotton goods, the directions being as follows: "Measure over the nipple in a vertical direction, from base to base of the gland, and take about four fifths of this for the width of the bandage; if the breasts are very large, it may require a little more. Next cut the cloth long enough to little more than encircle the chest over the affected mammæ. Divide each end into three equal parts, and split down to quite near the middle of the cloth, leaving the space between the tails of the opposite ends about half the width of the apparatus, or wide enough to about half cover the gland in a horizontal line." Secure the ends with buckles, or tie them. This plan was suggested to the author in his services to a patient where considerable congestion had occurred, and adhesive plaster for strapping was not accessible. Twenty-four hours after the application of the compress, the congestion was greatly reduced ; and in twenty-four hours later, the gland had reached its normal size. The straps were tightened at the end of the first twenty-four hours, so as not to lose the ground already gained. The application of the bandage should be made upon ordinary surgical principles, the object being to obtain firm and equal pressure over the entire organ.—*Ibid.*

EUSTACHE (*Lille*) : TREATMENT OF PROLAPSUS UTERI BY CLOSING THE VAGINA (*Archives de Tocologie*, September, 1882).—At Lille, where the author performs hospital duties, this accident is very common, due largely to the heavy weights which the poor women in that vicinity carry upon their back. This work is resumed often within fifteen days after delivery, in some cases within a week after that event. When pessaries and bandages fail to give the women relief, this operation is recommended. The various operations upon the perineum and the vulva are apt to give only temporary relief. (This can be readily understood, when the patients follow such a livelihood as the women of Lille.) The operation which the author performs is a modification of Le Fort's, the modification consisting, 1, in a difference as to the extent of the surface which is denuded ; 2, in the nature and in the manner of application of the sutures. Instead of removing the mucous membrane over a surface one or two centimeters in length, from the anterior and posterior walls of the vagina, he advises the removal of a segment at least four centimeters in length, and even of as great a width as that, so that the wound may be nearly square. By this means a much thicker bridge of tissue will be obtained, and it will be less likely to be torn asunder should violent efforts be made subsequently, as in coughing, vomiting, or lifting. Instead of using silver sutures, as recommended by Le Fort, he proposes the use of catgut. The silver sutures are difficult to remove, and the operation of removal is painful. Their use is also more likely to be followed by ulceration than the use of the catgut. Goodell recommends for this purpose sutures made from silk-worm gut, and Bantock has used the same in ovariotomy with satisfaction. The sutures which the author uses are allowed to remain in position, where they are gradually absorbed. Antiseptic precautions should be strictly followed during and subsequent to the operation. The author gives the histories of five cases, the first two of which were treated by Le Forte's method, and were unsuccessful ; the other three were treated by the author's modification, with permanent and gratifying results.—*Ibid.*

ACTION OF DRUGS ON TEMPERATURE.—Drs. H. C. Wood and E. T. Reichert (*Journal of Physiology*, August, 1882,) find that the cinchona alkaloids increase heat production and heat dissipation, and that with a single exception, heat dissipation is more decidedly increased than heat production. In this latter instance these functions were equally affected. In two thirds of the experiments made with cinchona sulphate heat dissipation was more increased than heat production. With cinchonida sulphate a greater increase of heat dissipation occurred twice, a greater increase of production once. The potash salts stimulated both theruric functions equally. Caffein increased heat production most. The results as regards alcohol of Drs. Wood and Reichert confirm those previously obtained by Dr. Bevan Lewis (*Journal of Medical Science*, Vol. XXVI., p. 31) and are to the effect that alcohol produces an average increase in both functions. Drs. Wood and Reichert regard Dr. Lewis' statement that the characteristic action of alcohol is an increase of heat production, as not being warranted by their experiments or his own. The final conclusion from these researches is "that there is no sufficient evidence as to which of the two functions is first affected by the cinchona alkaloids, alcohol, or the potash salts. In a general way these researches tend to confirm the views lately expressed in the *American Medical Weekly* respecting the action of anti-pyretics.

EVOLUTION OF ACUTE SPECIFIC DISEASE.—Dr. K. Millican (*British Medical Journal*, September 30th, 1882,) believes that all specific diseases may arise *de novo*. Smallpox and other diseases of very high specificity do so arise, but only in exceedingly exceptional instances. He believes that the processes of development and origin of species to be still going on in disease; that organisms not essentially disease germs, may become so on induction within the human economy. Certain results of Postear seems to confirm this new view of Dr. Millican. He further believes that the form taken by the disease depends upon the pabulum taken by the germ, and that specific characters are, in course of time, developed in the germ. This process, in his opinion, accounts for the *de novo* origin of the acute specific diseases, for abnormal cases of these diseases, and for changes of type in transmission. It is probably evolving through, in the unclassifiable diseases and abnormal cases, fresh specific diseases in the near future.

TUBERCULOSIS OF EARLY INFANCY.—Dr. Abelin (*Nordeskt Mediciniskt Arkir Band XIV., Häflet* 8) believes that tuberculosis is more common during the first year of life than is generally thought. The diagnosis during life of general miliary tuberculosis is difficult, nay almost impossible, and only to be made by autopsy. The disease appears to occur during certain years in epidemic form, and from the statistics of the Child's Hospital of Stockholm, Sweden, Dr. Abelin is induced to believe that a specific infection exerts an influence in the production of these epidemics. He has not found any cases of congenital tuberculosis. Fresh air and isolation he considers of great importance in treatment.

ACTION OF BLOOD CONSTITUENTS ON HEART.—Dr. S. Ringer (*Journal of Physiology*, August, 1882,) finds that water alone induces persistent ventricular spasm, which is obviated by sodium chloride. Sodium chloride solution alone caused prolonged ventricular dilatation. Minute addition of potassium salts to sodium chloride solution greatly accelerated ventricular dilatation and produce a normal heat. Albumen seems to be without influence.

PREGNANCY IN ADVANCED AGE.—A negress, aged 121, residing in Georgia, has given birth to several children, after she had passed her one hundredth year. The case seems to be well authenticated.

HEALTH OF CRIMINAL WOMEN.—Dr. E. H. Mosher (*Boston Medical and Surgical Journal*, October 5th, 1882,) finds that twenty per cent of the women resident in the Massachusetts

State Reformatory Prison for Women, were syphilitic. That but one per cent suffered from delirium tremens. Respiratory affections were infrequent. He concludes: First. Intemperance and unchastity are the chief vices which fill the penal institutions with women. As to the causes preceding these vices he expresses no opinion, and his paper is, therefore, defective. Second. These vices lessen recuperative power and increase susceptibility to disease. Third. The morbid conditions directly consequent on these vices are syphilis, alcoholism, dyspepsia, rheumatism, general anæmia. Fourth. Morbid conditions of body tend to increase the tendency to criminality. Fifth. The women committing high crimes are, as a rule, of a more sensitive nervous organization than those guilty only of drunkenness and unchastity. About one and one half per cent were insane, and about seven tenths of one per cent of the remainder were epileptic. Respiratory affections were rare, which speaks well for the prison.

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SELECTIONS.

HELMHOLTZ AND CARTER ON EYESIGHT.* In his "Popular Lectures on Scientific Subjects," first presented to English readers about seven years ago, Professor Helmholtz dwelt with some measure of satisfaction upon the circumstance that ophthalmic science had made an advance within a brief period of years which was quite without a parallel in any other department of the healing art. This statement was well borne out by the account which he himself gave in those lectures of the "Recent Progress of the Theory of Vision," and it is perhaps even more strikingly confirmed in the little volume which has been since printed by Mr. Brudenell Carter. Both books aim at wide usefulness, and are cast in a popular form, and both are notable and excellent in their way. But each has a purpose and method of its own. In a brief introduction which is prefixed to the lectures of Helmholtz, Professor Tyndall draws attention to the circumstance that those discourses by the Berlin professor of physics were primarily addressed to an audience of refined and cultivated literary taste, and that they were in reality delivered with a view of awakening an interest in the researches of science in that favored section of the social community. It must be admitted that their distinguished author has been singularly fortunate in the accomplishment of this design, for the lectures are models of the way in which such subjects should be presented to educated, but unscientific, people. In Mr. Brudenell Carter's more recent book the important theme which has been so gracefully and eloquently advocated by Professor Helmholtz is followed up into its practical and serviceable applications. The properties of light, and the structure and functions of the eye, are in the first instance explained; and this is done in language so simple and clear that the subject is brought within the easy apprehension of persons of the most ordinary intelligence, with one perhaps not very serious, although noteworthy, drawback, the somewhat too free use of unfamiliar words, which are out of place in a treatise addressed to the audience which Mr. Carter contemplates. It is hardly to be conceived that such terms as emmetropia, hypermetropia, asthenopia, and presbyopia can be of such frequent occurrence in the "precepts and injunctions which are repeated" in the author's "consulting-room day by day," as they are in the pages of the book which is here consecrated to the task of explaining those maxims, and of making them more readily and easily understood. With this one reservation the very high praise may be awarded to Mr. Carter's little book, that it is a worthy companion and sequence to the popular lectures of the German panegyrist of ophthalmic science. Mr. Carter's volume, although of small compass and unpretentious aspect, is really a most serviceable exposition of the principles which are concerned in the exercise and preservation of the human organs of sight, and of the functions of sound vision, as will be abundantly gleaned from some of the following notices of its contents.

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* 1. "Lectures on the Recent Progress of the Theory of Vision." By Professor Helmholtz. Translated by PYE SMITH, M.D., F.R.C.P. ("Popular Lectures on Scientific Subjects.") London: 1873.

2. "Eyesight, Good and Bad." A Treatise on the Exercise and Preservation of Vision. By ROBERT BRUDENELL CARTER, F.R.C.S. London: 1880.

All readers of the *Edinburgh Review* will be aware that the eye of the most highly organized animals, and of man, is a camera obscura, or dark chamber, analogous in many respects to the instrument with which the photographer accomplishes his very beautiful process of painting a picture by the limning power of light. The analogy between the structure of this instrument and the optical provisions of the eye has been alluded to by authors on popular science again and again, and Professor Helmholtz very skilfully avails himself of this analogy in laying the foundations of his account of the recent discoveries relating to the organ of vision. It is not, however, so generally understood how it is that either the instrument of the photographer, or the eye, remains a dark chamber, notwithstanding the fact that it has a clear and as it were open window exposed to the free impact of light. This, indeed, is not alluded to even by Helmholtz in his introductory explanation, and may therefore prove worthy of a passing remark. The circumstance is in a large measure dependent upon the somewhat curious fact that a shadow is cast behind even a transparent lens of glass when it is exposed to the full sunshine. The glass casts a deep shadow everywhere, excepting in the central spot into which the sunbeams are thrown, very much as a circular disk of opaque cardboard in the same situation might do. This is a necessary consequence of the action of the lens, since the bright focal image which it constitutes is formed by the drawing together into that spot of all the rays of light which strike upon the curved front of the glass. As all the rays are concentrated in that spot, there remain none that are available for the simultaneous illumination of the surface around. If the combination of lenses of the camera obscura, or the open pupil of the eye, are exposed in the same way to direct sunshine, a brightly luminous spot is formed in the centre of the field, and all the surrounding parts of the internal cavity are left in comparative darkness. The lenses of the camera, and the corresponding parts of the eye, in this way shut out all the light from the interior cavity, excepting that which is immediately employed for the painting of the image organically constructed within by the optical media. What is true in this case of the sun is true also of any collection of objects lit up, as in the case of the face of a landscape, by artificial illumination. Each point in the visible landscape is, in such a case, tantamount to a reflecting sun, and the image of that point is constituted within the interior of the camera or of the eye, and the combination of the images of the various points becomes a miniature picture of the external field in all its diversity of luminous intensity and shadow.

It will be unnecessary to enter at any greater length in this place upon the consideration of the optical properties of the lens, and of the means by which it so sifts out the different pencils or sheaves of luminous rays that are incident upon its curved front as to group and arrange them into correlative positions in the inverted miniature image after they have passed through the refracting medium. This is very lucidly and quite exhaustively dealt with in the first chapters of Mr. Brudenell Carter's "Treatise on the Exercise and Preservation of Vision." But it may be safely assumed that as much at least of this is generally understood as will enable the reader to follow with ease whatever allusions may have to be made to such optical matters for the purpose of this article.

The analogy of the camera of the optician to the human eye is, however, not complete in all its particulars. It breaks down in one very important point. The camera is adapted to its picture-forming work by sliding the front part of its rigid frame out or in, according as the objects which are to be depicted are near or far. The reason for this adjustment of the instrument to near or far work is very intelligibly explained by Mr. Carter in the following passage, which is worth quoting as an illustration of the clearness of his style, as well as for the argument which is to be reared upon its statements. In one of the introductory chapters of his treatise on "Eyesight," he says:

Among the first things which may be observed by the aid of a camera is, that the nearer the object is to the lens, the greater must be the distance between the lens and the screen, in order that a clear and well-defined image may fall upon the latter; and the reason of this is not far to seek. There is, for every lens, a constant distance at which it will bring to a focus rays which fall upon it in a state of parallelism. Let us suppose, in the case of a given lens, that this distance is ten inches. It is obvious that, if the rays which fall upon it are not parallel, but divergent or spreading out from their point of issue, a certain portion of the power of the lens will be consumed, so to speak, in rendering them parallel, before it can begin to render them divergent; and hence their union in a focal point will be delayed, or will only occur further away from the lens than if they were parallel originally. In like manner, if the rays are already convergent when they reach the lens part of its work will be already done; and the focal union will occur sooner, or nearer to the lens, than if the rays were parallel. In estimating the power of a lens, we always take its focal length for parallel rays as the basis of computation; and this is called its principal focal length, or, more commonly, its focal length only. It is, of course, invariable; while the distances of its foci for convergent or divergent rays will depend, in every case, upon the degree of the deviation of these rays from parallelism. Strictly speaking, all light exists in nature in the form of divergent rays, but those which proceed from a far-distant point to fall upon so limited an area as that of a small lens may, as already said, be considered and treated as parallel. As soon as the luminous point or other object approaches the lens, however, the divergence of the rays becomes very appreciable; and so the camera, when arranged to give a clear image of the horizon, would give only a blurred and confused image of objects on the other side of a room. In order to render the latter image as clear as the former, either the distance between the lens and the screen must be increased, or else the power of the lens itself must be increased, as by the addition of a second one. Unless one or other of these changes were made, the screen would intercept the rays of light before they were brought to union, and an imperfect or indistinct picture would be produced.

In the case of the telescope precisely the same adjustment for varying distance, it will be remembered, has to be performed. The magnifying glass at the eye end of the instrument is moved out and in by the sliding adjustment of that part of the tube. But for the most remote heavenly bodies, namely, the fixed stars, no alteration of adjustment is required for different luminaries, because they are all so very far away. They are all contemplated through the lenses of the telescope as objects at an approximately infinite, or at any rate optically incommensurable, distance.

Now, although the human eye is modelled upon the same general principles as the artificially constructed camera of the optician, the resemblance has not been carried so far as to confer upon it any form of sliding adjustment. Its globular form and its tense membranous walls forbid the adoption of any such plan. It nevertheless does possess some means of accomplishing an adaptation to distance. Persons endowed with the ordinary powers of sight are aware that they can, at will, look either on trees and hills upon the remote horizon, or on the letters of a book held within arm's length in the hand, and see both with equal facility and clearness. But they are not both visible in this distinct way at once.

The Dutch physiologist, Donders, has devised a very pretty way of demonstrating this. He points out that if a piece of net be held between a printed page and the eye, either the printed words of the page or the fibres of the net can be seen at will; but they can only be seen one after the other as the attention is shifted, in rapid succession it may be, from one to the other. When the letters are looked at, the net only presents itself as an undefined shadowy film, and when the net is the object of attention the letters melt away into a field of gray haze. In order to see first the one and then the other, some change has to be made in the arrangement of the structures of the eye, and if the net is held very near to the eye, and looked fixedly at for any considerable time, the effort is quite palpable, for it is soon accompanied by a very painful sense of fatigue. The way in which this accommodation of the eye to distinct vision at varying distances is brought about remained an inpenetrable mystery until a quite recent time. It is now, however, perfectly understood, and its discovery marks one of the great steps in the advance which Professor Helmholtz alludes to in his popular lectures on the "Theory of Vision," not only on account of the scientific interest which it involves, but also on account of the revolution which it has wrought in some part of the views and practice of occulists. Before, however, this matter can be adequately grasped, a brief reference must be made to the structural conditions and arrangements upon which it depends.

The outer investment of the eyeball consists of a tough, white membrane of considerable strength, which, on account of its seeming *hardness,* has been termed the *sclerotic* coat. It is, however, tense rather than hard. It is kept tight and of a fixed globular form by the liquid with which the greater part of its interior cavity is filled. It is opaque and impervious to light, except for a short space in front, where it is transformed into a kind of bow-window of transparent, hornlike substance, which, on account of its hornlike nature, is called the *cornea.* Through this bulging bow-window the pupil and iris can be seen. The iris is an adjustable curtain of interlaced muscular fibres, arranged immediately behind the cornea in such a way that it can be more or less drawn according to the need for diminishing or increasing the admission of light. The pupil is the dark interior cavity of the chamber, revealed through the clear central aperture, which is surrounded by the circular curtain. Immediately behind this clear central opening is fixed a double convex lens of transparent crystal, endowed with the power of forming a picture behind its posterior curved surface in precisely the same sense as the lenses of the optician's camera. The picture traced by the crystalline lens may indeed be actually exhibited in the case of the white rabbit, the coats of whose eyes are deficient in the usual opacity of the external coverings of the organ. When such an eye is taken out from the orbit of the recently killed animal, and held up with the pupil and cornea directed toward the flame of a candle, or toward a sunny landscape, an inverted image of either the flame or the landscape immediately presents itself, sketched out in light, upon the back part of the globe. In the living eye the image of light thus formed by the instrumentality of the crystalline lens falls upon a delicately organized screen of nervous texture which is termed the retina, and which, through the agency of its connection with the brain, is capable of feeling the image in all its diversity of color and luminous intensity. Such, essentially, in barest outline, are the mechanism and the optical and vital arrangements upon which the functions of vision depend.

The eye is preserved in the convenient form of a sphere or ball by the simple device of having its interior cavity filled with liquid, which prevents the limp and otherwise flexible coats from puckering up into any irregularity of shape. It is like a bladder distended with water, which is firm and tense on account of the contained liquid being so shut in by the membranous wall that it cannot escape anywhere from the tight grasp in which it is held. There are, however, in the interior of the eye, two quite distinct chambers in which this liquid is distributed, one in front of, and one behind, the crystalline lens. The lens hangs, as it were, in the midst of the liquid. The portion which is in front of the lens is little more than a very weak aqueous solution of salt, and is on that account termed the aqueous humor of the eye; the portion which is behind more nearly resembles a solution of white of egg. On account of this somewhat thicker consistency it is termed the vitreous or glass-like humor. Both humors, however, exert very nearly the same influence upon the vibrations of the light, and the optical part of the eye thus comes to be considered as composed simply of two refracting parts—the denser lens and the thinner humors. The iris is loosely suspended in the aqueous humor in front of the lens, so that it has the water-like liquid bathing both surfaces, and thus enjoys the same ready freedom of movement that it would possess if it were simply immersed in water. The humors of the eye are supplementary aids to the image-forming capacities of the lens. But they are only subordinate aids, as their influence in this particular is comparatively small. For simplicity's sake the crystal lens and the associated humors may be looked upon as together constituting one single lens, and the visual power of the eye in reality depends upon three curved surfaces which are found in the combination of humors and lens—the front surface of the globe, or cornea, upon which light in the first instance strikes as it enters the transparent media of the eye, and the front and the back protuberant surfaces of the crystalline mass itself. The position of the definite image within the eye is determined by the form of these surfaces, taken in connection with the density of the crystalline substance and its associated humors.

But although the globular form and tense state of the eyeball preclude the idea that there can be any sliding backward and forward of the lens to adapt it for sharp vision at varying distances, these by no means militate against an alteration of the curvature of the external surfaces of that body—a change of its shape without any variation of its bulk. This indeed is the method which has been devised. The lens is converted into a more powerful instrument of refraction, when near objects are looked at, by a drawing in of its transverse dimensions and a bulging out of its front contour. The structural means by which this piece of delicate adjustment is accomplished within the ball of the eye without putting any injurious strain upon its exquisitely sensitive and frail nerve textures is as admirable as it is efficient. The lens itself is contained within an outer sheath or shell of a somewhat horny character, and this is set in a circular rim held stretched out in all directions by a series of seventy elastic bands. These bands, which radiate out from the rim of the lens, are about a fifth part of an inch long, and they are connected at one end with the outer coat of the eye, and at the other with the lens. The lens settles itself down, under the outward pull of these elastic stretchers, into a certain definite form, which is therefore its shape of rest—the contour which it assumes when left free from all muscular interference—and this is its adjustment for the far point of sight. The elastic bands are, however, connected also with a series of muscular fibres which act antagonistically to them. When the muscles contract, the elastic bands act less effectively upon the rim of the lens ; and when the rim is less stretched by the elasticity of its suspending bands, the front of the lens is left free to bulge itself out with its own inherency of spring. The exertion of the muscles thus permits the curvature of the lens to be so changed that it becomes like a magnifying glass of higher power, and suited for dealing with the more divergent beams of nearer objects. When the muscles are relaxed after their contraction the lens is again flattened in front by the then preponderant influence of its suspending bands, and so restored to its adjustment for distant vision. The muscles of accommodation, which accomplish the service of altering the form and power of the lens, lie heaped in puckered folds all round the outside of its rim. The optical adjustment of the eye is thus virtually an antagonistic play between mechanically elastic bands on the one hand, and living muscular fibres on the other. The elastic bands flatten the lens to fit it for the vision of distant objects. The muscular fibres bulge the lens out. But, as the contraction of the elastic bands is a merely physical operation, like the return of stretched india-rubber to its original length after the extending force has ceased, while the contraction of the muscular fibres is an active effort of animal life, the eye is destitute of all exertion and strain when it is occupied with the vision of distant things, but is the seat of considerable strain so long as it is employed in the vision of near objects. The amount of the accommodation for near vision is also proportional to the quantity of muscular energy that is called into play. The bulging out of the front of the lens, to qualify it for dealing effectively with near objects, being a directly vital operation, is of course performed at the cost of expenditure of both organized substance and vital energy.

The conclusion that the eye is enabled to accommodate itself to sharp vision at various distances by a change in the shape of its crystalline lens is not one that has been doubtfully or loosely formed. The fact rests upon the evidence of keen observation and very careful experiment. The discovery of the process is indeed one of the most remarkable triumphs of scientific perseverance and skill. That the process is one of exceeding subtlety and delicacy may perhaps be inferred from the circumstance that it so long eluded the notice of the eager observers who were watching on its track. It was at one time supposed that the power of accommodation in some way depended upon change in the form of the front portion of the eye. This, however, was long ago disproved by an ingenious experiment of Dr. Young's. He demonstrated that the process is quite as efficiently performed when the head is plunged into water, and when the refracting power of the cornea is necessarily destroyed, in consequence of having under such circumstances an aqueous medium of nearly the same density in close contiguity both before and behind. The first material step toward the solution of the problem was made by the French surgeon Sanson. He was fortunate enough to have his attention caught by the fact that the two surfaces of the crystalline lens throw off a faint gleam of reflected light when very oblique beams of illumination are admitted into the eye from a lamp. Max Langenbeck, another very careful observer, next noticed that these faint gleams change the direction of their glance as the accommodation of the eye is altered from near to far vision. The glancing play of the curved surfaces of the lens was still further investigated by Cramer of Utrecht and Professor Helmholtz of Berlin, and, in the end, an instrument was contrived by Helmholtz which now enables the oculist not only to discern the changes in the shape of the lens, but also even to measure their amount, and to determine the precise curvature of the surfaces concerned, and the distances of those curved surfaces from each other, in any given eye. Professor Donders, the distinguished physiologist of Utrecht, has also shown how this instrument may be turned to practical account in producing optical compensations for defective sight.

There is one particular in which it appears at a first glance that the living eye possesses a marked advantage over the camera of artificial construction. Its dark cavity is of globular form instead of being square. The image which is projected upon the nerve screen of the eye is therefore distinct over a wider range than any that can be formed upon the flat ground-glass screen of the optician's instrument. All persons who are familiar with the manipulations of photographic art are aware that it is one of the imperfections of the instrument, which opticians are perseveringly endeavoring to remedy, that, whereas the luminous picture can easily be made very sharp upon the middle of the field, it invariably shades away into confusion and blurring toward the edge. When the glass screen is so placed that the divergent bundles of light from the immediate front of the lens are brought to a sharp focus in the picture, the divergent rays from the sides do not meet in sharp focal points in other parts of the same pictorial plane. This difficulty is to some extent overcome in the work of the optician in two ways. A combination of lenses is employed, in which the contour of each constituent of the associated group is so varied as to give it a tendency to correct the imperfections of the rest. But, in addition to this, opaque screens with small circular openings, known technically as diaphragms, are so introduced between the separate lenses of the group as to intercept and cut off the most oblique rays, and in that way prevent them from blurring the outworks of the picture. In the language of the photographer, it is said that small apertures and diaphragms are needed for the formation of a picture of large angular area upon a flat field; and the nearer the objects are which are being dealt with, the more rigidly this precaution has to be observed.

In the living eye this source of imperfect definition in the picture upon the screen is materially lessened by the curvature of the globe. The nerve screen is brought round toward the spot where the lateral rays can fall as sharply in focus as the central ones. With the photographic camera it is considered a very excellent combination of lenses which furnishes upon a flat field a picture subtending an angle of 44°. In the human eye, on the other hand, a fairly useful field of 160° in width is secured. But, in the eye, the vision is not absolutely sharp throughout the entire extent of this very wide field. A second and supplementary expedient is therefore brought into play to insure that exquisite perfection of result which is ultimately attained in the case of the eye.

The optic nerve, which is the great channel of visual impressions, and which issues for that reason from the brain, enters the back part of the globe of the eye, about a tenth of an inch on the inner side of its centre, as a thick white cord nearly a sixth part of an inch in diameter. This cord is almost entirely composed of exquisitely fine nerve threads, distinct from each other, but packed closely side by side. There are at least two hundred and fifty thousand of these delicate threads in each nerve. When the thick white cord has passed through the outer coats of the eye, these threads are loosened out from each other, and arranged into the form of a tangled web, which is distributed along the interior surface of the globe, so that it lies in immediate contact with the transparent vitreous humor with which the posterior portion of the cavity is filled. It is this nerve lining of the eye which is termed the *network* or retina. Each of its delicate threads originates backward in the actual substance of the brain. It is a prolongation outward of the brain-pulp. The retinal threads are spread exactly where the luminous pictures are traced within the eyeball by the lens. They play the part of the receiving screen. The threads themselves are the communicating lines by means of which the shocks of the luminous vibrations, concentred into focal points by the agency of the lens, are passed onwards to the brain. The nerve threads, where they are spread out on the inner lining of the eye, are associated with a considerable number of minute vesicles of pulp, and with some granules, fibrous material, and blood-vessels, which are all woven up together, so as to convert the retinal network into a kind of membrane, or tunic, in that form regarded as the inner coat of the eye. This coat, however, is everywhere so delicate as to be quite permeable to light. The nerve threads terminate in this lining web by being turned sharply back, so that their ends are thrust against the dense outer coat of the eye. Where this occurs each thread is either swollen somewhat out into a conical form, or it is moulded into the shape of a cylindrical rod: that is to say, some of the nerve threads terminate in conical bulbs, which are technically distinguished as the *cones* of the retina; and some end as *rods* which are in no way swollen out, and which are therefore of smaller size than the cones. When the structure of this part of the eye is examined in plan by the help of a microscope, the cones are seen to be packed together side by side like the constituent chequers of a mosaic pavement, but in most parts with a cluster of dots, which are the transverse sections of the rods, set round and between the chequers of the mosaic. The appearance then is that of a field of conspicuous spots bordered by smaller dots. There is a pavement of rod-bordered cones. Sometimes there is only a single row of rods to each chequer of the cones; sometimes there are two or more rows; and sometimes the individual cones are fitted close together without any borders at all. But this close-set pavement of cones, unbordered by rods, is found only in one particular part of the web. It is entirely confined to the central tract of the back of the eye—the part which is immediately opposite to the centre of the pupil. The retinal membrane is there thinned away, so that a shallow degression or pit is formed. In this central pit all the coarser parts of the structure, the non-nervous fibres, the granules, the blood-vessels, and even the rods disappear, and there remains only the closely set mosaic of cones, with an investment of filmy nerve vesicles of the most delicate organization in front. This hollowed or *dug-out* part, which is, in reality, the most sensitive spot in the nerve structure of the eye, is technically distinguished as the *fovea centralis*, or central pit of the retina. Helmholtz states that the cones, which constitute the mosaic in this central extra-sensitive spot of the eye, are smaller than those which are elsewhere associated with the bordering of rods. They have been estimated as being so exquisitely minute that not less than ten thousand of them could be ranged, side by side, within the measure of an inch. That, it must be remembered, implies that a square inch could accommodate one hundred millions of them. But, as a matter of fact, this extra-sensitive spot is of very limited extent. It is quite covered by the image of the finger-nail, held up at arm's length from the eye. It can receive not more than a word of ten letters of a page of the *Edinburgh Review*, at the ordinary distance for reading. The surrounding parts of the nerve tunic of the eye are of very inferior sensibility in comparison with this central spot. Their acuteness of visual perception is reduced by the circumstance that their retinal cones are separated from each other by the intrusion between them of the clustering rods, and the larger the amount of rods that are thrust in between the cones, the less keen is the sense. The effective consequence of this arrangement is that such portions of the visual picture formed within the eye as fall upon the central spot are very sharply and distinctly seen, while the other parts of the image are comparatively faint and obscure. If the attention is steadily fixed upon some definite object within the range of sight, this may be experimentally proved. It will be noticed, when the glance is in this way arrested upon a printed page, that one word is sharp and clear, but that the rest of the words are more or less blurred and confused, until the eye is allowed to run along the line, and so change the field of its operation. When this is done, the different parts of the line are brought in succession to bear upon the narrow limits of the central spot. Precisely in the same way, only those portions of a distant landscape are distinctly seen upon which the eye is centred at the instant. All other parts are obscure and blurred. It is for this reason that it is so difficult a task to see a balloon high up in the sky, until the speck has been once caught by the eye.

It can only be seen when the eye is so placed that its image falls upon the central sensitive spot. But this can only occur when the eye is directed immediately toward the balloon, and when the crystalline lens is duly adjusted for the task of distant vision. So long as the eye is roaming about in search of the as yet undetected position of the minute speck, its image falls upon parts of the visual screen which are too dull for its apprehension. Color, again, is very imperfectly distinguished by the less sensitive outside portion of the retinal surface.* It is, therefore, with the living eye very much as it is with the camera obscura of artificial construction. A sharply defined picture is formed only at the part of the recipient screen which is centrically opposite to the image-forming lens. The eye, nevertheless, commands, as has been already remarked, an exceedingly wide field. How, then, is this turned to practical account? Any one may answer this question experimentally, and find the proper solution of this enigmatical piece of optical science, by noticing what occurs in the ordinary process of reading. The eye is rapidly and almost unconsciously run along the words line after line. This is done in order that the image of each succeeding word may be transferred in turn to the sensitive tract of the visual membrane. The eye, when it is in use, never rests still for more than a passing instant. By means of a series of muscular cords which are attached to the outside of the ball it is rapidly rolled about in all directions, and clear images of different parts of the field of view are thus formed in such rapid succession that all are in the end seen as if sharply defined at the same instant. The attention, however, is so habitually given to the small part of the visual field which for the moment is most distinct, that the simultaneous confusion and indistinctness of other parts are overlooked. The eye is superior to the artificial camera as an instrument of wide definition on account of the rapidity and facility of its vital movements. The camera *fixes*

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* It is perhaps worthy of note as a curious circumstance that the central spot of the nerve membrane of the eye is not as responsive to *faint* luminous impressions as the surrounding duller parts. It is on this account that very faint stars are often most readily seen when the eye is not looking directly toward them. The central part needs a certain measure of intensity of light for the support of its higher powers of clear definition.

its glance upon the field in front, and forms a picture on its screen that has a clear and bright centre, and obscure and blurred outskirts. The eye *sweeps its glance* over the same range, and forms clear pictures of all its parts, one after the other, and it does this with such ease and quickness that the successive steps of the process are not consciously marked. The less sharp perception of the outer portions of the shifting scene is, however, not without a value of its own. Mr. Brudenell Carter somewhat happily points to this circumstance in the following passage :

In technical language, the whole lateral extent of vision is called the *field* of vision, and we are said to see directly with the central part of the retina, and indirectly with the lateral parts. Indirect vision is of great value for many purposes, and especially for giving us information as to the directions in which it is desirable for direct vision to be exerted. On this account the indirect is sometimes called the defensive part of the field, since it gives warning of the approach of large objects, and saves people from being exposed to many dangers. There are certain diseases of the eye in which the outer part of the field of vision is lost, so that the sight is circumscribed as if by looking through a tube ; and in these cases, although central vision may be good, and the patient able to read small print, there is yet great difficulty in guiding the footsteps and in avoiding obstacles, especially moving obstacles as in the street. There are many persons with contracted visual field who in one sense can see tolerably, and yet who would not be safe in a crowded thoroughfare. The loss of lateral or indirect vision renders them unable to ascertain correctly the relative positions of objects, and entirely conceals from them many which they would require to see in order to guide their steps with safety. An exceedingly curious example of the effect of contraction of the field of vision was lately related to me by an old gentleman, who had suffered from a malady which produces this effect, but whose remaining central vision I had been able to preserve by an operation. With the aid of spectacles he could read such type as that of this book perfectly, but he was somewhat short-sighted, and without spectacles even his central vision was a little doubtful. Standing one day at the entrance to the garden in front of his house, he was much puzzled by the odd movements of two things on the ground—things which he thought were two black birds of unknown species, hopping about and behaving very strangely. They turned out to be the feet of a market-woman who had brought something for sale, and whose body was invisible to him so long as her feet were in view.

But as there is one spot of supreme sensibility in the eye, there is also another part of the retina which is absolutely insensible to light. This is known technically as the "blind spot." Although rarely noticed, it is easily discovered when the attention is appropriately drawn to its existence. If a ship lying at anchor in a roadstead be looked at from the shore with one eye closed, while a second vessel with bright white sails pushes close to it, and then moves gradually away, it will be found that the one which is in motion suddenly disappears, or is blotted out, from the visual picture, and then comes into sight again. If the ship be sailing from left to right, the *right* eye must be used in the experiment, and the left eye be closed. The moving ship disappears because at that instant its image falls upon the blind spot of the eye. If a cross be made upon a sheet of paper, and the capital letter S be traced three inches, and a little lower, away to the right, thus,

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S

and if, while the left eye is closed and the attention of the right eye steadily fixed upon the cross, the paper is gradually withdrawn to about ten or twelve inches distance from the eye, precisely the same effect will be observed. The letter will suddenly be blotted out and then come into sight again as the distance of the paper is further increased. The letter disappears just when its image is thrown upon the insensible part of the retina. The explanation of this insensible spot is that it occurs where the optic nerve enters the ball of the eye, and where, therefore, there are no terminations of nerve threads spread out for the reception of the visual impression. The reason why this blind spot is not always perceived as a blot in the visual field is that it is placed outside the part where distinct images are formed, and also that two eyes are employed in the work of vision. The portion of the field that is blotted out in one eye is at the same instant visible in its companion. This latter expedient for the effacement of the blot is so effectual and complete that, notwithstanding the many millions of human eyes that had previously been affected by its presence, nothing was known of its existence until the reign of Charles II. when it was detected for the first time by the French priest Mariotte. This blind tract of the retina is nevertheless of such ample dimensions, that it is capable of swallowing up the image of eleven full moons placed side by side in the sky. It is just covered by the image of a human face looked at seven feet away. Mariotte was in the habit of amusing Charles II. and his courtiers by showing them one-eyed apparitions of themselves with their heads cut off.

The power of the eye to distinguish very minute objects depends upon the size of the cones in the central sensitive spot of the retina. Any image that can be completely sketched upon one of these cones can be seen as a visible point. The cones, or, in other words, the chequers of the retinal mosaic, are the sensational units. When the images of two contiguous and really distinct objects fall upon one cone of the retina, the double impact is fused into a single impression. The power of the microscope depends upon its spreading the image of the object that is looked at so widely out within the eye that more sensational units, or more chequers of the retinal mosaic, are engaged in the task of examining the details of the picture. Two stars that lie less than one minute of the spherical vault of the sky apart are seen as a single star, because the image of both is then impressed upon a single cone of the retina. But when they are looked at by a telescope two shining points are seen, because then each has its own image impressed upon a different cone. Most eyes fail to be able to distinguish parallel white threads that are seventy-three seconds apart, but Helmholtz gives an instance of one keen-sighted observer who could distinguish separately objects that were within fifty seconds of each other. A black speck on a white ground can be seen by good eyes when it is the four-hundredth part of an inch across. But specks of shining gold can be seen when not more than the eleven-hundreth of an inch in diameter. Black and white chequers, the twenty-fourth part of an inch across, can be distinguished when held up at such a distance from the eye that the image of each chequer occupies something like half the breadth of a cone of the retina.

The accommodation of the eye to sharp vision is accomplished without any conscious effort. When the glance is directed from a remote to a near object, the eye at once adapts itself to the new task which it is called upon to perform. The muscular bands set round the rim of the crystalline lens are thrown into action, and the front curve bulges itself out to the requisite extent. But, simultaneously with this, the pupil is contracted to a smaller size to cut off the most oblique rays of the luminous bundles then issuing from the near object, because these would confuse and blur the image if they were allowed to fall upon the retina. At the same time the two eyes are so rolled in their orbits as to be convergently directed to one common point. This convergence of the two eyes is so essentially and absolutely an unconscious act that persons with ordinary powers of sight cannot move one eye without its companion automatically adjusting itself to look directly at the same object or spot. One eye can only be turned more toward the right or left by moving both. So, again, if the stimulus of a strong flash of light is thrown suddenly into the pupil of one eye, so as to cause it to contract for the exclusion of the superfluous flood of illumination, the pupil of the other eye contracts also in intimate and apparently unconscious sympathy with its companion. The proper accommodation of the eye in all these correlative particulars is at once effectively brought about by merely directing the glance to the object which is under notice. The marvellous organ then does all else that is requisite of its own accord. The eyes do not even partake in the motion of the head if this is turned when their glance is fixed on a still object. Without conscious effort they accomplish the really surprising task of keeping themselves fixed upon the right point of attention, even while the platform upon which they are mounted is twisted about. These correlated and automatic movements of the eyes are so important and complicated an affair that a special part of the brain has been organized to take charge of their regulation and control.

The crystalline lens of the eye, which plays the chief part in forming the beautiful image that is traced upon the nerve coat of the organ, is itself constructed out of a series of flattened fibres of albuminous substance grouped in symmetrical loops round six separate axes, and connected together at their edges by interlocking teeth. The transparent mass built up in this way is comparatively soft at the beginning of life; but it gets harder and denser with the progress of time. One natural consequence of this method of construction and gradual hardening, however, is that the movements of accommodation, which involve a change in the shape of the lens, are less easily performed with advancing years. The adaptation for distant sight which requires no muscular effort remains unimpaired. But the bulging out of the lens for dealing with near objects and more divergent rays cannot be properly performed. The lens gets to be too rigid to suffer any material alteration of shape. This is the cause of the failing sight of age. In early life the lens can be so curved as to deal effectively with objects that are not more than four inches and a half from the eye. At the age of forty years the lens generally cannot be curved enough to form a sharp image of any object that is less than nine inches away. At fifty years the point of nearest sight is removed to thirteen inches; at sixty years to twenty-six inches; and at seventy years all power of accommodation is, for the most part, lost—that is to say, the lens has become too rigid to be able to alter its form at all, and therefore remains permanently fixed in the contour that suits it for distant vision. But the increase of the curvature of the lens, for the accomplishment of near vision, is virtually the same thing as if an additional convex lens were introduced into the eye. The remedy for the failing accommodation and imperfect sight of age is therefore to add such a second lens in front of the eye. In other words, spectacles with convex lenses must be employed when the sight is used for near objects. The increased refracting power which cannot be furnished by the living movements of the eye is thus artificially supplied by the addition of an outside lens, and the divergent rays from near objects with its aid can be brought into sharp focal points within the otherwise too shallow depth of the ball. Such objects as the page of a printed book are held far from the eye in order that the pencils of rays which enter the pupil may be so lengthened out as to enable them to be focussed within the available span of the weakened and unadjustable lens. But then, with this expedient, the sharp image is brought within the depth of the eye at the cost of being materially diminished in size, and when it is so reduced it is, of course, less advantageously dealt with by the fewer nerves which receive the impression. A magnifying glass then increases the size of the image within the eye because it enables sharp focussing to be accomplished when the object is nearer to the organ, and when, therefore, the image is spread out upon a larger extent of the retinal membrane.

For a considerable time after the use of spectacles was introduced there was no recognized system of expressing their optical power. Every maker adopted some arbitrary plan of his own. But about the year 1860 a scheme was proposed for remedying this irregularity. The power of the lens was then marked by figures that expressed in inches the distance at which parallel rays were brought to a focus. Thus No. 16 implied that the lens would form its sharp image for parallel rays sixteen inches away. An alternative and still more satisfactory scheme was devised by Professor Donders of Utrecht, and is now coming into general use. In this system the French mètre, which corresponds to 39.337 inches, is adopted as the unit of the nomenclature. No. 1 lens thus means a lens which forms a focal image for parallel rays one mètre's length from the glass. Each succeeding number in simple arithmetical progression then implies the halving of the focal length and the doubling of the power. No. 2 forms its focus half a mètre, and No. 3 a quarter of a metre away; No. 2 also is double the power of No. 1, and No. 3 double the power of No. 2. The unit of this system, which has the great advantage that it promises before long to be universally adopted by different nationalities, is technically designated "a dioptric."

One of the prominent objects of Mr. Brudenell Carter's book is the teaching of the doctrine that the compensation of spectacles shall be immediately applied as soon as failing sight begins to manifest itself with advancing years. No more mischievous mistake can well be made than the one which is involved in the prevalent idea that the use of spectacles should be put off as long as possible. This becomes evident at a glance as soon as it is understood that the case is one of incapacity of the lens of the eye to adapt itself to near vision in consequence of loss of accommodating power. The continued effort of the delicate mechanism of the eye to accomplish a task which is beyond the measure of its capacity must necessarily be attended with an injurious, as well as painful, strain. Squinting is one of the evil consequences which are apt to ensue if such fruitless efforts are long persevered in. Mr. Carter remarks upon this point in the following monitory strain:

We have seen that the effect of accommodation is precisely that of adding a convex lens to the passive eye; and so, when accommodation fails, we can supply its place by adding the required lens by art. To do this is the ordinary function of the spectacles which are required by all people, if their eyes were originally natural, as time rolls on; the principles on which such spectacles should be selected is that they should be strong enough to be effectual; and they should be used as soon as they are required. Opticians often supply glasses which are too weak to accomplish what is needed, and which leave the eyes still struggling with an infirmity from which they ought to be entirely relieved; while the public frequently endeavor to postpone what they look upon as an evil day, and do not obtain the help of glasses until they have striven hard and fruitlessly to do without them. These are important practical errors. It cannot be too generally understood that spectacles, instead of being a nuisance, or an incumbrance, or an evidence of bad sight, are to the far-sighted a luxury beyond description, clearing outlines which were beginning to be shadowy, brightening colors which were beginning to fade, intensifying the light reflected from objects by permitting them to be brought closer to the eyes, and instantly restoring near vision to a point from which, for ten or a dozen years previously, it had been slowly and imperceptibly, but steadily, declining. This return to juvenility of sight is one of the most agreeable experiences of middle age; and the proper principle, therefore, is to recognize loss of near sight early, and to give optical help liberally, usually commencing with lenses of + 1·25 or + 1·50, so as to render the muscles of accommodation not only able to perform their tasks, but able to perform them easily. When, as will happen after awhile, in consequence of the steady decline of accommodation, yet more power is required, the glasses may be strengthened by from half a dioptric to a dioptric at a time, and the stronger glasses should at first be taken into use only by artificial light; the original pair, as long as they are found sufficient for this purpose, being still worn in the daytime.

In his chapter on the management of aged sight, Mr. Carter alludes to a somewhat elaborate article which appeared in the *Quarterly Review* some years ago as having "given new life to a variety of erroneous and mischievous beliefs which were founded upon misconception of facts." The article to which he refers should, perhaps, have been rather adduced to illustrate the changes of view that occur as a natural incident in the progress of advancing knowledge. It was written before anything was known of the mechanism of accommodation which has been here described. In one passage its author avowedly states that it was still an unfathomable mystery how adjustment to vision at various distances was brought about in the eye, and in another the imperfection of aged sight was ascribed to "the flattening of the ball of the eye."* The doctrine of the reviewer to which Mr. Carter takes exception is to the purport that the effect of spectacles diminishes with their use, and that such use should therefore be deferred as long as possible—conclusions which are enforced in one passage by the plausible and misapplied aphorism that "tools become weapons in careless hands." The common prejudice against using spectacles as soon as the impairment of the sight begins to be observed with advancing age appears to have unfortunately arisen from the fact that there is a serious disorder of the eye, known as glaucoma, which is attended with obscure vision, resembling that of old sight, but which is nevertheless altogether different in its essential condition. The mischief in glaucoma usually proceeds with an accelerated pace. Stronger and stronger glasses are used on account of the assistance which each fresh accession of strength at first gives. But the sufferer in the end becomes hopelessly blind, and the result is then erroneously attributed to the influence of the glasses which have been employed, although as a matter of fact this has had nothing whatever to do with the issue of the case. The injury to the sight in such instances is really due to an over-tense state of the eyeball having been set up, and to the destruction, in consequence of abnormal pressure, of the delicate nerve structures within.

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* The article, which was on "Spectacles," appeared in the issue of the *Quarterly* for June, 1850.

Mr. Carter unhesitatingly affirms that the habitual use of strong magnifying glasses is not injurious to ordinary eyes, and he supports his opinion in this particular by referring to the circumstance that watchmakers, who commonly employ magnifying glasses in their work, in reality enjoy a very enviable immunity from diseases of the eye. It appears that it is quite an unusual thing to find a working watchmaker among the patients of an ophthalmic hospital. Mr. Carter holds that the habitual exercise of the eye upon fine work, such as these men are engaged in, tends to the development and preservation of the powers of vision, rather than to their injury.

Artificial illumination is somewhat more trying to the eye than daylight. Its injurious influence is chiefly due to the deficiency in its beams of the violet rays which are most especially serviceable in the processes of vision. The red and yellow tints in such light are in excess. This is in some measure put right when the red or yellow glare is passed through blue glass screens. But this expedient unfortunately so much reduces the absolute amount of illumination that the remedy is almost as bad as the disease. Deficiency of light is always injurious to eyes that are engaged in exacting work. On this account the ordinary plan of lighting a room where fine work of any kind has to be carried on by central gas-burners hung from the ceiling, is objectionable in the last degree. In this plan of artificial illumination, the light is given in excess where it is not required, and it is deficient where it is wanted. Oil lamps, with well-arranged argand burners, accompanied by reflectors and screens, are, on the other hand, among the best kinds of illumination that can be adopted. Mr. Carter alludes to the form of oil lamp commonly known as the queen's reading-lamp, which was in the first instance introduced by Stobwasser of Berlin, in terms of unqualified and well-deserved praise. But the moderator lamp is quite equal to it in all serviceable qualities, if furnished with a similar shade of dark-green glass lined with the white surface within. The most trustworthy and pleasant of all lights for evening use is certainly that which is supplied by a moderator lamp so arranged that the eye is protected from the glare of the flame, at the same time that the light is evenly and softly thrown upon the work. It is an additional drawback to artificial light that it contains more heat than is present in diffused daylight, and that if long and injudiciously used it is apt, on that account, to be injurious to delicately sensitive eyes. This objection particularly applies to such lamps as that of Mr. Silber, in which the heating effect is increased in nearly the same proportion as the brilliancy of the light in consequence of the perfect combustion of the oil. Mr. Carter advises that, when lamps of this class are employed, a flat half-inch cell of plate glass, filled with a saturated solution of alum, should be placed between the lamp and the eye.

This effectually intercepts the heat, and yet does not materially diminish the light. when candles are adopted instead of a lamp, it is advisable that whatever number are in use should be grouped as near as possible together, so that the light may be shed evenly from one common centre. Cross-lights are always distressing to the eye. Mr. Carter particularly recommends that the least exacting kinds of work should be reserved for evening and night. Thus men engaged in literary pursuits should read most by day, and write most by night. It is worthy of note that reading causes more strain to the eye than writing, and that copying work in writing makes a greater demand upon the organ of vision than off-hand composition. Twilight, and a mixture of twilight and artificial illumination, should be avoided for any kind of work.

The pale cobalt-blue tint is the best that can be employed when protection for the eye from intense glare is sought, as in the case of travelling upon snowfields in bright sunshine. The green glass that is often adopted for this purpose is not by any means so worthy of confidence. Reading in railway travelling is objectionable in the highest degree for a very obvious reason. The oscillation of the carriage continually alters the distance of the page from the eye, and so calls for unceasing strain in the effort to keep the organ in due accommodation for the ever-varying distance of the dancing image.

The exact fitting of the frame-work of spectacles to the face and eyes is of more importance than is generally conceived. If the centres of the lenses of the spectacles do not accurately coincide with the centres of the pupils of the eyes, the consequence is that the images in the separate eyes are a little displaced from the positions which they ought to hold, and that a somewhat painful and injurious effort has to be made by the eye to bring those images back into due correspondence for accurate vision. An incipient squint is apt to be in this way produced. Mr. Carter recommends that people should look to the centering of their spectacles for themselves. This may be easily done by standing before a looking-glass with the spectacles in their place. If the fit is a good one, the centre of the pupil should then appear in the centre of the rim. Fully formed spectacles are always to be preferred to folding frames, because they permit of more satisfactory adjustment in this particular, and because they are more easily kept in the right position with regard to the eyes. The only advantage which the pebble enjoys over glass for the construction of spectacles is the immunity which it possesses against scratching and fracture on account of its greater hardness.

The defect known as short sight is

due to exactly the opposite cause to the one which is operative in the failing sight of age. The passive eye, when no accommodation effort is made, is in such conditions incapable of bringing the rays from remote objects into focus upon the retinal membrane of the organ. The globe of the eye is too deep for the powers of its optical, or image-forming, parts. The sharp image is traced within the vitreous humor of the eye where there is no nerve membrane spread for the reception and recognition of the luminous picture. With such eyes the natural range of sharp vision is limited to something like five or six inches of distance from the front of the organ. All objects beyond that are obscure or invisible. The accommodation power, however, is effectively applied to nearer distances than in ordinary eyes. Very near objects can be sharply seen. The near point of short-sighted vision is generally within three inches of the eye. In such a case the retinal image upon the nerve membrane of the eye is one third larger than the one which would be formed with ordinary sight, and it is at the same time twice as bright. Short-sighted persons, on this account, can see smaller objects than long-sighted persons can, and also can see with much fainter light. The artificial remedy in the case of the short-sighted eye is the employment of spectacles with concave lenses; as by the use of such lenses the pencils of light that enter the eye are made more divergent than they would otherwise be, the sharply defined image is thrown farther back in the eye, and thus brought upon the too distant retinal membrane. The familiar and common idea that short sight improves with advancing age is not in accordance with fact. The slight improvement in vision that occurs with the progress of time is simply due to the narrowing of the pupil, and to the consequent exclusion from the eye of very oblique rays. Short-sighted people in old age very commonly need the help of convex glasses for near objects at the same time that they require concave glasses for distant vision.

Mr. Carter most clearly proves that short-sighted persons should begin to use concave glasses at once when the defect in their vision is observed. The fault is primarily due to the circumstance that the ball of the eye is too deep for the converging power of its lens. The retina is set too far back. But it unfortunately happens, when this is the case, that the continued effort to see objects beyond the natural range of the eye exerts a strong tendency to still further increase the backward elongation of the organ, and in that way to increase the original defect. This may in extreme cases be carried so far as entirely to destroy all power of sight. It can hardly be too clearly or too generally understood that the short-sighted eye must at all times be looked upon as a weak organ rather than a strong one, and as open to dangers which do not affect more ordinary eyes to the same degree. The defect too commonly originates, indeed, in a feeble and preternaturally unresisting state of the outer coat of the organ, upon the elastic resiliency of which the preservation of the proper proportions and shape in some measure depends. If delicate children, in whom such a condition is most apt to be found, are allowed continually to bring their work up nearer and nearer to the eye, and to sit straining at close application for long periods, short sight is almost certain to be engendered. In such cases concave spectacles are required, not so much to make the sight better, as to compel the keeping of the work farther away from the eye, and so to remove the strain which is augmenting the mischief. Mr. Carter is earnest in his condemnation of the reprehensible practice of teaching delicate children to read and write at too tender years. Some careful investigations, made by Dr. Cohn at Breslau, prove that something like one child in ten at ordinary schools is affected with short sight, and that the short-sighted children are almost invariably found in badly-lighted schools, and where the desks and seats are so planned as to cause stooping while at work. Dr. Erismann in Russia, and Drs. Agnew and Loring in America, strikingly confirm these observations of Dr. Cohn, and there seems to be but too good ground for the suspicion entertained by Mr. Carter that badly lighted and injudiciously furnished schools must be regarded as nurseries for the development of short sight. The well-ascertained fact that short sight is most prevalent in England among dwellers in towns and among the children of the educated classes, certainly tends to support this view.

There is another form of irregularity of vision, dependent upon faulty construction of the optical mechanism of the eye, which is not unfrequently met with, and which is due to the curvature of the front portion of the globe of the eye not being exactly the same in all directions. The curve is for the most part flatter in a transverse direction than it is in a vertical one. Nearly all eyes are affected with this irregularity in a slight degree ; but it then does not produce any sensible defect in the sight. When, however, it is present in a more marked degree, vertical and horizontal lines cannot be simultaneously brought into sharp vision upon the retina. When the letters in a printed book, which are principally composed of upright strokes, are fairly seen, other characters, which are chiefly formed of transverse strokes, are so confused that they cannot be distinguished from each other with certainty. This defect is technically known as astigmatism, a word which implies that all the divergent pencils concerned in the formation of the visual image are not brought to sharp focal points. The defect is discovered by looking attentively at a figure composed of black lines crossing each other transversely and obliquely after the manner of the rays of a star. When some lines in this figure are sharply defined, others are blurred and confused. An American physician, Dr. Pray, has devised a very excellent test for the detection of this visual imperfection. He employs bold capital letters, some of which are formed of lines ranged horizontally, and others of lines drawn transversely or obliquely. When these letters are looked at by an astigmatic eye at a distance of six or eight feet, the stripes are visible in some letters and not in the rest. This defect is capable of being remedied to a considerable extent by the use of spectacles whose lenses are of a cylindrical instead of spherical contour.

There is one very serious structural defect of the eye too frequently met with, which has an interest of its own on account of the remarkable success with which the principles of optical science are applied for its relief. It occasionally happens that, as the crystalline lens of the eye condenses and hardens with advancing years, it thickens at the same time and loses its permeability to the passage of light. The pupil then assumes the translucent aspect of a mass of falling water, and the disease has on that account received the name of cataract. The sight is in the first instance impaired during the production of this opacity of the lens, and ultimately lost. The remedy for the defect is the removal of the obscured lens out of the way, and the employment in its stead of an artificial lens of glass placed in the front of the eye. The crystalline lens is extracted from the interior of the eyeball through an opening cut into the outer coat of the organ for the purpose. After the removal of the lens no image, of course, is formed upon the nerve membrane of the eye until a lens of glass is placed in front of the pupil. A most striking proof is then afforded of the circumstance which has here been insisted upon, that the accommodation of the eye for vision at various distances is accomplished by the crystalline lens. After this lens has been removed by the surgeon, all power of accommodation is lost. Spectacles of different powers have to be employed for near and for distant objects, and no objects can be distinctly seen but those which happen to be at the distances for which the spectacles are immediately fitted.

The eye does not deal achromatically with the colored constituents of light. But the chromatic dispersion which it causes is not so great as that which is produced by glass, on account of the fluid or moist nature of its refracting media. When the flame of a distant street lamp is looked at through a piece of blue glass, a red image is seen surrounded by a broad, violet-colored halo. The green and yellow rays issuing from the flame are in such circumstances intercepted and quenched in passing through the glass, while the red and blue rays traverse it. The red and the blue rays, however, do not then travel exactly along the same path after they have entered the ball of the eye. They are separated from each other by the dispersive power of its refracting media, the lens and humors, and so seen in the form of a red centre fringed with blue.

The vitreous humor which intervenes between the crystalline lens of the eye and the retina is not absolutely homogeneous and pellucid in its structure. It contains traces of fine fibres, and minute vesicles, scattered about, and floating more or less in the more liquid portion. These floating motes, although possessed of a considerable measure of transparency, are not as thoroughly permeable to the vibrations of light as the investing liquid. They cast faint shadows upon the retina, which are apt to be noticed, when the attention is fixed upon them, as flying specks. They scarcely ever appear immediately in front of any object that is under close scrutiny, but present themselves floating about somewhere around. They exist naturally in all eyes, and can always be discerned when a white cloud is looked at through a pinhole pierced in a card. They are occasionally increased in number or conspicuousness from some incidental derangement in the composition of the humor, and are then apt to become annoying or troublesome, although not really indicating any serious mischief in the organ. It is under such circumstances that the floating motes are spoken of as *muscæ volitantes*.

Helmholtz, in the face of the various considerations which have here been rapidly passed in review, adopts the somewhat startling doctrine that the perfection of the eye depends not upon the excellence of its construction as an optical instrument, but upon the manner in which it is used. As a mere optical instrument the organ is, he says, singularly imperfect. It has, in some degree, every defect that is liable to occur in crude and clumsy human work, and it has special faults in addition that are not incident to artificially made instruments. The chromatic aberration of its humors, the astigmatism of its irregular contours, the blind gaps of its nerve screen, the imperfect transparency of its refractive media, the interposition of blood-vessels in front of the retinal membrane, the narrow limitation of the area of sharp definition, and the prevalent blurring of the lateral parts of the field, are all conditions which must be classed as optical imperfections. Yet every one of these imperfections is so counteracted and neutralized in the use of the organ under the plan of the employment of two eyes, and under the expedient of the rapid transference of the attention to different parts of the image, that it is actually unrecognized as a defect, and undiscovered until the most refined powers of scientific investigation have been brought to bear for its detection. Helmholtz aptly remarks in regard to these structural shortcomings: "The perfection of the eye is practical, not absolute. It consists not in the avoidance of every error, but in the fact that its numerous defects do not prevent it from rendering the most important and varied services." Its crowning glory is, not that it is a piece of elaborately perfect mechanism, but that it is a living organ unceasingly adapting itself to an endless diversity of varying conditions, with never-failing success, and with never-swerving exactness. It is in this sense that the eye deserves the eulogy which is, in the end, pronounced upon it by Helmholtz himself, and which is to the effect that of all the triumphs of living organization it is "the choicest gift of nature—the most marvellous production of her plastic force."

But although the optical projection of a sharply defined picture upon the nerve membrane spread within the eye is the indispensable base of the act recognized as vision, this is by no means the ultimate completion of the process. When the vibratory impulse of the luminous beams has been stamped upon the inmost layers of the retina—the outspread pavement of cones—it there initiates a new order of commotion, a new system of action. The tremor of the luminous impact is there transformed into molecular tumult within the substance of the nerves, which is then transmitted back along the delicate fibres of pulp until it finally reaches the brain. It is this transmutation in the character of the agency which goes far to explain the curious circumstance that the ends of the nerve threads in the retina—the recipient membrane for the impact of light—are *set backward*, or away from the incidence of the luminous vibrations. The cones of the retina are, as it were, thrust blindly against the substance of the investing coat of the eye, and not projected forward toward the light by which they are to be influenced. The luminous vibrations do not enter the cones, and then pass onward through them into the nerve threads, but lodge themselves in the cones as the final goal of their vibratory progress, and are there absorbed or destroyed. Each cone is a laboratory for the conversion of a mere physical impression into a vital change. The impact of the luminous ray stirs up and starts in the interior of the cone an entirely new kind of force and new order of progression. The nerve influence, which passes from the eye to the brain, travels at the sluggish rate of two hundred feet in the second, whereas the ethereal vibrations of light pass in the same brief interval through nearly two hundred thousand miles. The German physiologist, Holmgren, and Professors Dewar and M'Kendrick have shown that this new influence, generated in the nerve by the agency of light, is accompanied by electrical development. Currents of electricity are produced whenever flashes of light are thrown upon the retinæ of recently killed frogs. But the nerve influence is not merely a current of electricity, because this again travels with a speed which is measured by thousands of miles in a second, and not by hundreds of feet.

That the cerebral perception of a visual image is altogether a different affair from the mere stamping of a luminous impression upon a sensitive screen, is further proved by a series of considerations that can be in no way explained by merely physical agency. Thus there are two eyes employed in the optical part of the process of vision, and two pictures are assuredly made upon the nerve structures of those organs. But only one image is seen, unless when the consentaneous action of the two eyes has been abnormally deranged. There is an absolute and quite inseparable fusion of the two visual pictures into one mental impression or perception. This result, however, requires that each of the two images shall fall upon a duly correlated or corresponding part of the associated eyes. With squinting eyes this sympathetic correlation is deranged, and two images are seen. Then, again, the images which are stamped upon the eyes are inverted, or upside down, as is manifest upon looking at them as they are formed within the eyes of a dead rabbit; yet the single image seen in the ordinary operation of sight is upright. The projections of solid objects traced in the pair of eyes are not absolutely the same. But, in the single picture which is seen, there is no confusion or incongruity; the two unlike projections are blended into the perception of an object standing out in solid relief. The explanation of all this intrinsically is that the optical images impressed upon the eyes are simply signs, and that these signs are interpreted by an ulterior operation in the brain.

The eye is supereminently, among the organs of sense, the one which ministers to the intellectual operations. It deals almost exclusively with matters of experience and comparison. The distance of objects that are looked at is inferred from the muscular effort which is made in augmenting the curvature of the crystalline lens of the eye, and in converging the two eyes upon the point of concentrated attention. The idea of actual magnitude is derived from the comparison of these efforts of accommodation and convergence with the size of the impression upon the retinæ. The conception of a solid projection results from the consideration of the differences of aspect incident to varying points of view. These facts, and numerous other arguments of a like character, which exigency of space alone excludes from notice, all combine to demonstrate that vision is the work of prolonged and complicated experience and experiment which begins in the cradle, and only ends upon the margin of the grave. Helmholtz alludes very tellingly in his "Popular Lectures" to the circumstance that vision and speech are alike in the peculiarity that they both deal with arbitrary signs which have to be learned before they can be understood. He says:

Learning how to speak is obviously a much more difficult task than acquiring a foreign language in after life. First the child has to guess that the sounds it hears are intended to be signs at all; next, the meaning of each separate sound must be found out by the same kind of induction as the meaning of the sensations of sight or touch; and yet we see children by the end of their first year already understanding certain words and phrases, even if they are not yet able to repeat them. We may sometimes observe the same in dogs.

Now this connection between names and objects, which demonstrably must be *learned*, becomes just as firm and indestructible as that between sensations and the objects which produce them. We cannot help thinking of the usual signification of a word, even when it is used exceptionally in some other sense ; we cannot help feeling the mental emotions which a fictitious narrative calls forth, even when we know that it is not true ; just in the same way as we cannot get rid of the normal signification of the sensations produced by any illusion of the senses, even when we know that they are not real.

There is one other point of comparison which is worth notice. The elementary signs of language are only twenty-six letters, and yet what wonderfully varied meanings can we express and communicate by their combination ! Consider, in comparison with this, the enormous number of elementary signs with which the machinery of sight is provided. We may take the number of fibres in the optic nerves as two hundred and fifty thousand. Each of these is capable of innumerable different degrees of sensation of one, two, or three primary colors. It follows that it is possible to construct an immeasurably greater number of combinations here than with the few letters which build up our words. Nor must we forget the extremely rapid changes of which the images of sight are capable. No wonder, then, if our senses speak to us in language which can express far more delicate distinctions and richer varieties than can be conveyed in words.

The most recent, if not the most important, of the discoveries which science has made in reference to the structural arrangements of the eye is one which is not alluded to either by Professor Helmholtz or by Mr. Brudenell Carter, and which, in the first instance, seemed to indicate that the organ is, in reality, a photographic, as well as an optical, dark chamber. It has been long known that a peculiar coloring matter is deposited between the external protecting coat and the inner nerve membrane of the eye. The intermediate layer with which this coloring matter is structurally associated contains also the delicate blood-vessels which are provided for the nourishment of the highly vital nerve substance, and it has on this account been raised into the dignity of a special coat, called the choroid, or chorion-like,* tunic. The blood-vessels are distributed in this as minute radiating tufts which are intermeshed with each other, and between the interlacing vessels is laid down a flat pavement of hexagonal cells which are all densely packed inside with small opaque granules of a dark color. This lining of dark pavement-like cells appears to answer the very important purpose of preventing the reflection and backward dispersion of light after it has struck upon the nerve coat of the eye. It is analogous to the black stain of the inside of the photographer's camera. The rod-like terminations of the retinal nerves, which have been already alluded to, abut immediately upon these pigment cells, and are almost certainly connected with them by some intimate, although as yet not perfectly ascertained, relation. The German observer Boll, a few months since, observed that a very beautiful and quite distinctive purple color is produced in the eyes of frogs in the immediate vicinity of these dark pigment cells, and he further noticed that this purple color was invariably bleached and destroyed on exposure to strong light, and that it was also capable of being reproduced out of the pigment cell when the organ containing it was left for some time in darkness. The observations of Boll have since been amply confirmed by other experimenters, and the color thus produced out of the pigment granules in darkness has received by general consent the designation of "visual purple." The renewal of this delicate and evanescent tint can hardly be looked upon as a really vital act, because it occurs quite independently of any circulation of the blood. It can be destroyed and reproduced in the eye of a recently killed frog a considerable number of times by simply exposing the eye alternately to light and darkness. Another German experimenter, Kühne, has, however, ingeniously succeeded in fixing the image stamped luminously upon the retina of a dead eye by washing the membrane, after exposure to light, with a solution of alum potash. The idea not unnaturally occurred, after the discovery of this curious effect, that the production and destruction of this visual purple, and the reduction of its coloring principle by the influence of light, might have to do with the conversion of the optical impression into a conscious sensation—in other words, that vision may possibly be a photographic process. That such, however, is not the case, is manifest from another significant fact which further investigation has brought to light. Both the pigment cells and the visual purple are absent altogether from the central pit, which is assuredly the seat of the most acute visual sensibility, and Kühne's photographic pictures accordingly cannot be produced there. The retinal cones, which are essentially the instruments whereby optical impressions are converted into visual sensation, are utterly destitute of all trace of color. Kühne, indeed, seems to have already satisfied himself that frogs can see perfectly after all the visual purple in their eyes has been destroyed by long exposure to the action of light. It must therefore, for the present, be held that nothing conclusive is yet known as to the purpose for which this visual purple is formed, or as to the part it plays in the marvellous processes with which it is associated. The discoveries of Boll and Kühne are very curious, and well deserving of the further investigations which they will assuredly receive; but there is nothing in regard to them, so far as they have yet gone, which at all favors the assumption that a photographic "theory of vision" is the goal to which the progress of science tends.

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* The chorion is a well-known vascular membrane which bears a strong resemblance to the choroid coat of the eye.

REMARKS ON THE DIAGNOSIS AND TREATMENT OF CHRONIC INFLAMMATION OF THE OVARY. BY LAWSON TAIT, F.R.C.S., SURGEON TO THE BIRMINGHAM HOSPITAL FOR WOMEN.

The diagnosis of pelvic diseases may be said to have received its first real life from Simpson; for, before his day, no such attention was given to these affections as deserved the name of systematic study. He it was who instituted precise means of physical diagnosis, and upon that he reared methods of treatment which have made a lasting impression on our practice. Like all innovations, Simpson's methods led, even in his own hands, but mostly in those of his friends and old lovers, to an excess of zeal; and the mechanical school of gynæcology, of which he was unquestionably the founder, led many to the belief that, armed with a sound, a speculum, a caustic stick, and some new-fangled pessary, the practitioner could subdue all the pelvic ailments of women. All these aids, valuable in their way, had their enthusiastic supporters, were declaimed against by others, did an infinite amount of mischief in their turn, and have, finally, been referred to more limited and less hurtful fields of practice.

From the same phase of surgical development arose a number of operative proceedings, each of which has extended our means of relieving human suffering, but each of which went through a course of rough experimentalization which is now terrible to look back upon. Simpson found that division of the cervix relieved the sufferings in certain cases of dysmenorrhœa, and enabled a few sterile women to become pregnant. Immediately we had a flood of hysterotomes all over the world, and every sufferer had her cervix divided. Thousands of unnecessary operations of this kind were, and many still are, performed, and not a few deaths occurred from the practice.

Coincident with this innovation, we had the employment of pessaries, fortunately a less hurtful practice, but carried to an extent of uselessness which is positively amusing ; and other illustrations of similar strivings in the dark might be given.

From the writings of Dr. Henry Bennet and Dr. Tilt, especially the latter, another new departure was derived ; for attention was directed by these authors to the possibility of the ovaries being the seat of the troubles, relief from which was sought in the treatment of the uterus.

Still another impetus, and the greatest of all, in my opinion, was given to gynæcology by Dr. Thomas Keith, who taught us that our traditional fear of the peritoneum was only a bugbear, and that it would serve us as well as any other part of the body if dealt with fairly. After Mr. Spencer Wells had gone on for twenty years operating on hundreds of cases of ovarian tumor, with a mortality of about twenty-five per cent, Dr. Keith persuaded us that ovariotomy could be done with less than six per cent of deaths. The mortality of Dr. Keith's and my own is now as low as three per cent, and this after we have both tried the so-called antiseptic system of Lister, and have given it up as more dangerous than useful.

The outcome of such splendid work in the removal of ovarian tumors will soon be felt in very many ways, but in one it has already given evidence of another and altogether new direction for abdominal surgery. As long as Mr. Spencer Wells's example ruled our practice, and as long as his high death-rate was the best we could get, we operated on ovarian tumors only when they threatened life, and we delayed the case by mischievous tapping as long as we could. We felt that we were not justified in opening the abdomen for conditions whose severity did not threaten life. Now, however, when the removal of an ovarian tumor is fatal only when the patient has been tapped, or the operation injudiciously delayed, we are justified in performing abdominal section, not merely for the saving of life, but for the relief of suffering.

This new practice has had many good results, not the least of which is that it is shedding a whole flood of light on the pathology of pelvic disease, and is even helping us to understand the physiology of the female sexual organs. Thus my own practice, the details of which will shortly appear in a special work, has convinced me that the usually accepted doctrine of the coinciuseless ovaries and tubes to relieve suffering, in some cases to save life: and we do not mutilate our patients half so seriously as is done in the removal of an eye. The removal of a diseased eye often fails to save the other, and is then an useless operation. Removal of a cancerous eyeball is always an useless operation, for the disease always returns.

Removal of the inflamed uterine appendages may yet turn out to be a failure for some cases; but it can never be so bad as the removal of an eyeball for cancer; and, in the hands of experienced operators, the operations have quite an equal risk. Besides this, the operation for the removal of the uterine appendages is as yet in its infancy; we have very much to learn about it; yet, in spite of this, in my hands, of thirty-five cases performed for chronic inflammation, there has been only one death, or a mortality of 2.85 per cent—a mortality which, I have some reason to believe, is less than that of excision of the eyeball. This one death was due to causes entirely preventable, and ought not to have occurred. The operation is justified by its primary success; and my belief is that my mortality, as my experience goes, will not be more than 1 or 2 per cent.

Against the operation, *à priori*, arguments have been brought. The first of these is, that it unsexes the patient. This is a perfectly needless argument, because the disease for which the operation is done, has already accomplished this, as it has rendered her barren, and has made sexual intercourse a burden which she ought not to be called upon to bear. It has been said that removal of the uterine appendages destroys sexual desire; but the uniform testimony of such patients as have given evidence is that it has no such effect. But, suppose it did, what nature can any man have who would refuse to his wife relief from suffering, because it would interfere with the gratification of his lust? I am surprised that such an argument has been seriously advanced.

It has further been alleged that useless operations will be performed. Until our powers are perfect, this is very likely. But of what operation in surgery can this be denied? Have we not heard of lithotomies being performed where there was no stone—of amputations carried out where there was no disease in the joint? How many thousands of people have been cut for squint, when what they wanted was a pair of proper lenses?

As a matter of fact, I have found that the mere serious discussion of the operation with a humbugging patient will lead to a diagnosis. If her sufferings be real, she will jump at the chance of relief; if they be not, she declines to take the risk of the operation.

But such an operation as this demands the justification of ultimate success; and here we are on the most difficult ground. The most recent summary of cases is to be found in the second volume of Agnew's "Surgery," just published, in which 171 cases are tabulated, the work of forty operators, with a mortality of 19 per cent. This is quite a satisfactory explanation of the opposition with which the operation has been met. I should long since have condemned the proceeding, and have discontinued my practice, if my mortality had been 10 per cent. In fact, I did cease to operate for five years, because my mortality was 20 per cent. Of the forty operators in this table, there are only three who have operated on fifteen or more cases for all causes, not only chronic oöphoritis. These are:

Hegar	42	7 deaths.
Battey	15	3 ,,
Lawson Tait	30	4 ,,
	87	15, or 16.6 per cent.

Increased experience, therefore, brings better primary results; and this is more than ever visible, if my whole experience is taken of 75 cases, with only 6 deaths, or 8 per cent. In my recent experience of 61 cases there have been only 3 deaths, or 5 per cent; and, confining it to the cases of chronic oöphoritis of 35 cases, there is only 1 death or 2.85 per cent. It is clearly, therefore, an operation which can be justified by its primary success only in the hands of a surgeon who has large and constant practice in abdominal surgery; and when it is done by a large number of operators in twos and threes it can only meet with speedy and well-merited condemnation.

Precisely the same kind of argument applies to its secondary results, which, in the hands of inexperienced operators, are admittedly bad. For my own results so far I have abundant cause for satisfaction; some of my cases are yet incompletely relieved, but by far the majority of them are absolutely cured. The first patient from whom I removed an ovary for pain, nine years and a half ago, was completely relieved of her symptoms, and she remains so to this day.

I cannot burden this paper, already too long, with the recital of cases, but two I shall give as samples of what may be done by this operation; and I select them only because, having been promptly cured themselves, they have ever since been actively engaged in helping to cure others as surgical nurses. One of them is now attached to my own private staff, and has materially assisted in the recovery and cure of many of her suffering sisters.

G. B., aged twenty-four, when placed under my care by Dr. Hammond, of Nuneaton, had enjoyed perfectly good health until she was seventeen years old. At that time she had some kind of low fever, the nature of which she did not know, and no history of it could be obtained. During its progress she suffered greatly from pelvic pain, and was nine months in getting better, but practically she had never been well since. She had never been free from pain in the back and in both groins, the pain running down both thighs and being greatly intensified just before and during each menstrual period. She had had a great variety of treatments, the general view being that there was some displacement of the womb. Several operations had been performed, and she wore pessaries for some months. The result of all this was that she steadily grew worse, and for three years before being placed under my care she had been a helpless cripple.

Her general appearance was that of good health; in fact, she was distinctly robust in appearance. Her menstruation was regular, but scanty, seldom lasting more than two or three days; and during that time she described the pain as being agonizing, and those who had watched her saw no reason to doubt her words. My diagnosis in this case was that of cirrhotic oöphoritis, the result of acute inflammation of the exanthematic variety. I proposed to remove the glands; but, when the whole features of the proposal were explained to her, she promptly declined to submit to it, and left the hospital. In October, however, she voluntarily returned, and begged me to operate. I complied with her request upon October 15th, and found the ovaries small, atrophied, and adherent. The removal of the appendages was difficult, as it nearly always is in such cases. She made a rapid recovery, and left the hospital early in November. She did not menstruate till the end of April, 1880, and at that time declared herself greatly improved. I lost sight of her till the 8th September, 1881, when she came to show herself as a perfect cure. She had been for nine months, and is now, engaged as a surgical nurse in a large general hospital, is perfectly fit for her arduous duties, and says she is in perfect health. She menstruates occasionally, but entirely without pain.

J. W., aged twenty-four, began to menstruate at thirteen, and was regular and free from pain till she was nineteen. Then she had an acute illness, and ever afterward suffered intense pain for two days before and during the whole of her periods. The amount of loss became very profuse. She was admitted to Leicester Infirmary, and was there for many months, and obtained considerable relief, the treatment being to a large extent local, by pessaries, etc. After this she went out to service, but had to leave every situation on account of being wholly unfit for work for the greater part of the month. She was treated in several medical institutions, but obtained no permanent relief. She was sent to me in July, 1880, when I found the ovaries large and tender, and fixed behind the uterus. I removed them and the tubes on July 18th, the operation being a difficult one. The glands were both cystic, and the tubes occluded and distended. She recovered speedily, and soon entered upon her duties as a nurse.—*Brit. Med. Jour.*

RELIEF THROUGH SPONTANEOUS BLEEDING IN PNEUMONIA. By JOHN MEREDITH, M.D., Edin.

The following case of illness, if it were not for one or two circumstances associated with it, would not, I expect, possess any points of interest deserving of special notice. In consequence of these circumstances, the nature of which I shall presently describe, I began making notes from the commencement of my attendance. The story of it is briefly as follows: On October 28th, 1881, I was requested to see a Mrs. M——, aged twenty-four, wife of a pensioner, residing a little way out of Wellington. I saw her about four o'clock in the afternoon, and found her suffering from an attack of pneumonia, complaining of a severe pain in the left side; skin dry; very frequent short respirations; quick pulse, and temperature 106 degs., fully. I found the pneumonic space was at the base of the left lung. The patient informed me that she experienced "a shivering fit" two days previous, and that she had been getting worse and worse ever since, and, further, that she was a little over three months gone in the family way. I directed that warm poultices should be applied at once to the pneumonic side, and that she should take a mixture composed of tincture of aconite and solution of acetate of ammonia in small doses at short intervals. At ten o'clock the same evening a message came saying that Mrs. M—— had some bleeding from the nose. I did not then attach much importance to this. At the same time I sent a few doses of ergot extract with hamamelis tincture for the patient to take if it persisted, and added instructions for applying cold cloths to the face and the nape of the neck. At three o'clock in the morning of the 29th inst.—*i.e.*, about five hours afterward—an urgent message came for me to go and see her, and off accordingly I went. I found the patient now in a particularly exhausted condition, appearing all but bloodless; pulse hardly perceptible at the wrist, the breathing labored and rapid, and there was very little power to speak, and that only in a feeble whisper. The skin was still dry, but comparatively cool; temperature 101 degs. Her bedclothes were saturated with blood, and there was much also in a basin beside the bed. The blood had escaped in spurts from the nose, and to some extent from the mouth; no cough with it, nor any effort at vomiting. It issued most likely from the Schneiderian membrane, and from it some escaped through the mouth. There was no pain anywhere complained of. The means resorted to, to arrest the hæmorrhage, for it was still going on when I reached the bedside, were injection of hazeline and water into the nostrils, continuation of the medicine sent at ten o'clock, dashing water on the face, or cloths wet with water, and holding up the arms of the patient. Before long the discharge became less and appeared to cease altogether in about an hour's time, and I felt at liberty to go away again. I called next at nine o'clock, and learned that there had been a little bleeding since my early visit. At half-past twelve, when I saw the patient for the third time that day, some signs of improvement were perceptible. The hæmorrhage had ceased; the temperature was now 100.3 degs., pulse at the wrist a mere thread; no complaint of pain, but there was some cough, for which an ordinary cough mixture with antimonial wine and chlorate of potash was ordered. She was able to partake of liquid food, which was freely supplied to her. After this there was nothing special to note for a few days, except that the area of dulness was extending to the left lung.

On November 3d the temperature was 99 degs.; pulse, 110. The temperature had been about 100–101 degs., since the morning of October 29th. The patient seemed to me at this stage to have passed the most dangerous point in her illness, and was able to speak, consequently I began making all the inquiries I could regarding this, to me, unprecedented form of systemic relief. Since then I have often thought of the case, and chiefly in connection with what we term now the old practice of blood-letting in acute diseases. The remarkable change which followed the hæmorrhage from the nose on the night of the 28th was, as I have said, unprecedented as far as my experience is concerned. The body temperature fell about 5 degs. in a very short time, and there was complete relief from pain.

I should mention with regard to this patient, that she is one of those who never perspire—"at all events nothing to speak of," to use her own words, even in summer weather. The relief occurring in the way it did seemed to me but a pronounced illustration of the physical law, which is to the effect that a body expelling some of its component matter loses heat thereby and becomes cold, and that, no doubt, in proportion to the rapidity of the expulsion and the quantity of the loss. In this case there must have been a condition of extreme tension of the blood-vessels, and the portion of the contents which performed the part of expelling the other portions lost heat thereby and became cooled, but the expelling power pervaded the whole system; that being so, general cooling of the whole system followed. I do not know how the practice of systematic blood-letting arose in medicine, and if I did this would not be the place to attempt any historic account of it. There can, however, be no doubt, on the principle of there being nothing new under the sun, that cases like the one I am describing happen in all countries, and fall under the observation of medical practitioners; consequently it occurs to me, thinking over the question of general blood-letting with the light shed upon it by this case, that our predecessors, noticing the relief following spontaneous bleeding — but noticing also the exhaustion produced by excess, as in this instance—argued that, if moderate bleeding were resorted to, and that at a spot where it could be controlled, the evil effects of spontaneous bleeding would be avoided and the good only secured. At the beginning a few selected cases ending favorably would be a sufficient inducement for the adoption of the practice generally without reference to special selection. Thus it may fairly be presumed that a practice, originating from a good and judicious act, subsequently degenerated into a scandal and an injury to mankind, falling into such a depth of degradation as richly to deserve the scathing satires of Le Sage, as exhibited in his character of Dr. Sangrado, besides that of many other observers; from the consideration of which it may of a truth be asserted that degeneration is ever more fertile than evolution in the formation of varieties.

The spontaneous bleeding was the first point of interest in the case to which I wish to draw attention, and I would observe that it occurred on the third day of the illness. Usually in this district relief in such cases comes later, about the fifth day, and in the form of diaphoresis. As an example of this, I shall refer to another case of inflammation of the lungs which I had to attend about the same time, that of a Mrs. T——, aged about twenty-six years, suffering from over-lactation. On the evening of December 1st the temperature of her body was over 105 degs. with the usual symptoms of acute pneumonia. On the morning of the 2d, being the fifth day of the illness, epistaxis began, and she saturated three pocket-handkerchiefs very soon, then diarrhœa with copious watery stools followed. The breasts, which had been distended, discharged about a quart of milk, according to her attendant's account. Her skin had not been particularly dry, but there was not much perspiration. The temperature fell very soon to 100 degs. Next day it was at normal. In this case the heated vascular tension found relief through more than one outlet, and in consequence there was no special prostration.

But to return to Mrs. M——'s case and show how it fared with the implicated lung and the uterine contents. In the course of a few days the pulmonary dulness indicating hepatization extended over the whole of the left side with blowing-sound respiration and no crepitus audible. I was not able to detect any until about a fortnight after the commencement of the illness, when resorption was taking place. The labored character of the breathing lasted for several days after the epistaxis crisis, and then became normal. The next point of interest was the effect of the illness upon the uterus and what it contained. On November 5th the patient complained of some discomfort rather than pain in the lower part of the abdomen, and there was tenderness on pressure, leading one to infer that there would be miscarriage before long. The pulse continued quick, always over 100, at times as high as 120. The temperature remained between 99.4 and 101 degs. It never went down to normal. These conditions left no doubt on my mind that the fœtus in utero was dead. Still the pain and tenderness about the womb were at times very little complained of, but more so at others, and opiates were given for their relief. In spite of all, the patient was visibly improving, taking food fairly well and feeling tolerably cheerful. On November 29th some liquor amnii escaped, and it smelled offensively the attendant told me. I examined per vaginam and found the os uteri dilated to the size of a four-penny piece filled by a clot or something feeling like it. Next day regular uterine pains set in, and the contents of the womb were expelled about three o'clock in the afternoon. The expelled substance consisted of twin boys, about the fourth month of uterine existence, attached to one placenta. All had a macerated appearance, but did not smell badly, not so bad, by all accounts, as the water which had escaped the day before. The fœtuses had been dead for a long time, it was evident, I believe from the time of the epistaxis, thirty-three days before. These dead bodies had remained in the uterus all that time, and caused not one alarming symptom or anything calling for interference, bearing out an observation I often heard Mr. Lister make more than twenty years ago—namely, that living tissue possesses antiseptic power capable of delaying putrefaction for a long time. At the same time, there is no doubt, these bodies and their appendages kept up a certain amount of blood-poisoning as indicated by the pulse and increased temperature. The patient suffered for awhile from metritis, but in a few weeks this passed away, and the lung affected completely recovered, but it was some months before she regained her usual state of health.

The histories of these two cases of acute pneumonia possess still another feature of interest, in that they both tend to confirm the view that the disease is of zymotic nature, belonging to the preventable order. For example, Mrs. M——'s house, although internally in good sanitary condition, was situated in close proximity to a bad-smelling privy, the smell from which pervaded her house both before the accession of the illness and at the commencement of it.

Mrs. T——, like many country laboring people, had potatoes stored in her bedroom, and the decay smell from these struck one at once on entering the room. The sanitary condition of her house in other respects was fairly good, both inside and out.—*Lancet.*

THE SELF-LIMITED DURATION OF PULMONARY PHTHISIS.*

By AUSTIN FLINT, M.D., LL.D., Professor of the Principles and Practice of Medicine and Clinical Medicine, Bellevue Hospital, New York.

The title of the paper which, in compliance with a courteous invitation, I have the honor to submit to the section on Medicine may require some explanation. By the name pulmonary phthisis I mean the chronic affection so-called and studied half a century ago by Laennec, Louis, Connell, and their contemporaries. The history of this affection as contained in the medical literature of the last quarter of a century, illustrates the mutability of pathological doctrines, and the evils liable to ensue when the connection which should exist between histological and clinical studies is severed. This is not the time nor place to consider the instructive lessons to be learned from this history. Suffice it to say that, at last, the teachings of histology coincide with those of clinical experience, and that now, after the lapse of fifty years, the names chronic phthisis and tuberculosis are again synonymous. By the term "self-limited" I mean the duration of a disease as determined by its intrinsic tendency—that is, irrespective of either medicinal or any extrinsic agencies. The term was introduced by the late Professor Jacob Bigelow in a discourse published in 1835. Quoting his definition, he says: "By a self-limited disease I would be understood to express one which receives limits from its own nature, and not from foreign influences." He cited whooping-cough, measles, scarlet fever, small-pox, erysipelas, and typhoid fever as diseases which run a certain course and end after a certain time from their intrinsic limitations. This doctrine has lost the novelty which it had at the time of the publication of Bigelow's discourse. No one at the present day will dispute the doctrine as applied to certain diseases. Within late years the list of self-limited diseases has been extended. To the essential fevers (the eruptive, the continued, and the periodical) have been added acute pneumonia, acute articular rheumatism, and acute dysentery.

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* Read at the British Medical Association, Worcester, August, 1881.

My object in this paper is to show that pulmonary phthisis may have a self-limited duration; that, in a certain proportion of cases, this disease ends favorably, irrespective of any appreciable extrinsic agencies, recovery taking place, provided the nature and extent of the local lesions be not such as to render them either irreparable or innocuous. If the doctrine of self-limitation as applied to phthisis be not entirely new, it has, at all events, received as yet very little consideration in medical literature and in medical practice. If the doctrine in this application be true, it has important pathological and practical bearings, to some of which I shall briefly advert.

How is self-limitation to be proved as applied to phthisis or any other disease? Facts pertaining to morbid anatomy and to therapeutics may render the application of the doctrine probable; but, evidently, positive and complete proof can only be afforded by collection of cases in which the disease pursued its course without active interference in the way of treatment, either medicinal or hygienic, and without notable changes in habits of life, or in any of the conditions under which the patients were situated when the disease became developed. For obvious reasons these requirements for absolute proof are not easily obtained in cases of a disease like pulmonary phthisis. Yet cases involving these requirements occasionally come under medical observation. The hopeful mental state which generally accompanies phthisis sometimes leads patients to trust altogether to nature for restoration to health, and to continue their usual manner of living without any alteration. Some patients do this from a conviction that they have not a malady of sufficient consequence to claim attention, beyond, perhaps, palliative remedies; and some from circumstances which render it difficult to do otherwise. Again, there are phthisical patients who do nothing in the way of either therapeutics or hygiene from a thorough scepticism as to the advantage of doing anything. Hence it is practicable to collect from a field of observation sufficiently large, during a term of years, a certain number of cases which exemplify the natural history of phthisis.

In 1858 I had collected a considerable number of histories of cases of phthisis, recorded during the preceding twenty years of medical practice, and I was led to examine the collection for those cases in which there had been an arrest of the disease. Twenty-four cases were in this category. The histories of these twenty-four cases were analyzed with reference to points of agreement in the management; I assumed that in the points of agreement must lie the means by which the disease had been arrested, provided these points of agreement were not equally common in other cases in which the disease was not arrested. A striking result of this analytical study was, that in a few cases no appreciable influences, either of medication, diet, or regimen, had been brought to bear on the disease; the patients took no active remedies, and continued unchanged the same in habits of living as before the development of the disease. It seemed a logical inference that in these cases the disease was not arrested, but that the recovery was owing to an intrinsic tendency thereto; in other words, the disease ended in recovery from self-limitation. An abridged account of the histories of these twenty-four cases was embraced in a report published in the *American Journal of Medical Sciences*, January, 1858.

In 1863 I had accumulated additional cases, in which the disease had either been arrested or ended from self-limitation. The number amounted to sixty-two. These cases were studied analytically in the same way as those analyzed in 1858. In seven cases no medicinal or hygienic measures of management were employed. The recovery in four of these cases were complete. In three cases good general health had been regained and maintained for a long period, some cough and expectoration remaining. An abstract of the histories of the sixty-two cases was published in the Transactions, of the New York Academy of Medicine for the year 1863.

In 1875 were published, in a work entitled "Phthisis in a Series of Clinical Studies," the results of an analysis of the histories of all the cases of phthisis which I had recorded during a period of thirty-four years, the number being 670. Of these 670 cases forty-four ended in recovery. Details of the history of each of the forty-four cases are given in the work sufficiently to render evident the recovery and the correctness of the diagnosis. In addition to these forty-four cases there were thirty-one cases in which the disease ceased to progress, and remained non-progressive for at least several months, and in most instances for several years. In thirty-one cases the phthisical disease was considered as having ended, complete recovery not taking place in consequence of irreparable lesions. As cases for analytical study with reference to the agencies which may have caused the arrest of the disease, these thirty-one cases of non-progressive phthisis seemed hardly less valuable than the forty-four cases which ended in complete recovery. Adding together the two groups of cases, out of the collection of 670 recorded histories of phthisis, there were seventy-five in which the disease either ended in complete recovery or remained for a long period non-progressive.

These seventy-five cases offered a rich field for analytical study with reference to several points of inquiry having important bearings on prognosis and treatment. The only point to be here noticed is the proof which some of the histories furnished of the recovery or the non-progression being due to an intrinsic tendency of the disease. In how many of these cases was it evident from the histories that the disease was not arrested by either medicinal or hygienic treatment? The answer to this question furnishes the proof of self-limitation.

Of the forty-four cases ending in recovery, in twenty-three there was no medicinal treatment to which arrest of the disease could be attributed. In several of the twenty-three cases there was no medicinal treatment; in the remainder of the cases, the treatment consisted of simple tonics, palliatives of cough, or remedies to meet some other symptomatic indications. In none of the cases could the medicinal treatment be considered as curative. Of the thirty-one cases of non-progression of the phthisical disease without complete recovery, in fifteen there was no medication by which it might be supposed the disease had been controlled, and in several no medicinal treatment whatever. The two groups of cases—namely, those ending in recovery, and those becoming non-progressive without recovery—thus furnished about an equal proportion of those in which medicinal treatment was either wanting, or in no degree curative, the proportion in the first group being twenty-three of forty-four, and in the second group fifteen of thirty-one. This correspondence in the two groups has perhaps a significance beyond mere coincidence. In respect of hygienic or non-medicinal treatment, in some cases of both groups there was no change whatever in habits of life or other circumstances. In other cases there were changes involving improved hygienic conditions, but in a considerable number the changes were of a character that a potential influence could not be attributed to them. It is probably correct to say that the changes may have favored the recovery or the non-progression, but that they were inadequate to arrest the disease. In my work is introduced a condensed history of each of the seventy-five cases, which form the groups now referred to.

A self-limited duration cannot be inferred from a single case, or from a very few cases, for this reason: the course and termination may have been affected by influences which are extrinsic, but not apparent. In order to obviate liability to error on this score, the number of cases must be sufficient to render it impossible, or vastly improbable, that in all such influences could have been overlooked. It is needless to say that the cases from which the inference of self-limitation is drawn must have been carefully observed and honestly recorded. Another requirement is essential—namely, there must be no room for distrusting the accuracy of the diagnosis. Assuming competency for observation and veracity, the diagnosis in each of the seventy-five cases is attested by the recorded histories, and it will be admitted that the number of cases is sufficiently large for the exclusion of error on the score of unrecognized extrinsic influences. The number of cases might be increased by the addition of those which have come under observation since 1875. This seems to me needless with a view to strengthen the conclusion respecting self-limitation. I therefore submit, as substantiated by the clinical facts which I have cited, the following proposition: Pulmonary phthisis, in a certain proportion of cases, has a self-limited duration, the disease ceasing to exist after more or less progress of the local affection, all symtoms referable to the lungs disappearing, and recovery, as regards the general health, being complete. The disease is also self-limited in a certain proportion of cases in which lesions remain, giving rise to more or less of cough and expectoration, the persistence of these lesions not being incompatible with good general health and long duration of life.

Many topics of interest and importance cluster around this proposition.

It is an interesting fact that self-limitation is exemplified in the majority of the fatal cases of phthisis. As is well known, the disease, as a rule, advances not by a continuous progress, but by a series of successive invasions separated by variable intervals. After each invasion, or as it has been termed, tuberculous eruption, there is, temporary self-limitation of the disease. I will not venture on a discussion of the question whether this fact is sufficiently explained by the statement that each eruption of tubercles for a time exhausts the tuberculous cachexia, or whether the fact be owing to the production of successive broods of the bacilli tuberculæ. It suffices to state the clinical fact. The fact suggests a capital object in the treatment—namely, prevention of a renewed invasion. The continuous advancement of the disease, as an exception to the rule, is the pathological feature of the so-called "galloping consumption," or phthisis florida.

In the cases ending favorably, which have been referred to as furnishing poof of a self-limited duration, the diagnostic symptoms and physical signs were so well marked as to leave no room for doubt as to the existence of phthisis. From cases which have come under my observation, I have been led to believe that not very unfrequently phthisis ends by self-limitation without having advanced far enough for the diagnosis to be considered as positive. A patient has had for some time a slight cough, either dry or with a scanty expectoration ; there has been some loss in weight and the body heat is somewhat raised, with, perhaps, spitting of blood. These symptoms, taken in connection with the age of the patient, and, it may be, grounds for suspecting a congenital predisposition, point to a tuberculous affection. But examinations of the chest in such a case may fail to reveal distinct physical signs. Very likely the problem, as regards the physical diagnosis, is to determine whether at the summit of the chest on the right side there are abnormal signs or only the normal points of disparity between the two sides. There may be found only a subcrepitant râle, or slight pleuritic rubbing, or an interrupted respiratory murmur at the summit on one side, without conclusive evidence of tuberculous solidification. Under these circumstances, the physician either commits his judgment to a diagnosis of incipient phthisis, or, as is more probable, he reserves an opinion for further developments. After a short time all the pulmonary and general symptoms disappear. Now, if incipient phthisis have been diagnosticated, the physician concludes that the diagnosis was erroneous. He feels obliged so to conclude in consequence of the common belief that phthisis does not thus commence and end from self-limitation. But it is highly probable that the diagnosis was correct. Phthisis existed and ended in its incipiency. It would be proper enough to distinguish these as cases of abortive phthisis. If I mistake not, all medical observers of much experience will admit that the foregoing sketch represents a class of cases not extremely rare. That they are not very rare is a fair inference from the frequency with which the traces of an old, small phthisical affection are found in bodies dead with other diseases than phthisis.

A topic of practical importance is the bearing of self-limitation on the prognosis in individual cases of phthisis. The analytical study of my collection of cases showed that, as a rule, in those which ended favorably from an intrinsic tendency, the tuberculous affection was moderate or small in amount, but that there are exceptions to this rule. All observers of much experience will agree that the prognosis in cases of phthisis is to be based more on the general condition of the patient than on the local symptoms and signs. To consider the elements of prognosis would be here out of place, even if time permitted. In general terms, the symptoms which denote tolerance of the phthisical affection are those which indicate a favorable intrinsic tendency, and, on the other hand, pyrexia, progressive loss of weight, frequency of the heart's action, and anorexia, point to an opposite tendency. Of special importance, in a practical view, is the bearing of the doctrine of self-limitation on the conclusions to be drawn from observations respecting the agency of therapeutic and hygienic measures in the treatment of cases of phthisis. How many and various are the remedies which have been supposed to have been sometimes curative in cases of this disease ! Instances of their apparent curative power have been attested by honest observers. Making the fullest allowance for errors in diagnosis, I cannot doubt the credibility of more or less of these cases. Recovery has taken place under the employment of divers remedies ; yet these remedies have so generally failed that, for the most part, they are now obsolete. The explanation of their apparent efficacy is to be found in the doctrine of self-limitation. The disease ended favorably, not from a specific influence of the remedies, but from an intrinsic tendency. This is not saying that the remedies may not have been, to a greater or less extent, serviceable. It may be laid down as a principle applicable to all diseases that whenever experience has seemed to show success from treatment by a variety of remedies the efficient cause lies in the disease itself. This principle becomes more evident the more we become acquainted with the natural history of diseases. To accept this principle is not to disparage medicinal treatment. In certain cases of phthisis, as of other diseases, self-limitation is a factor co-working with curative measures, and, as perhaps may be added, sometimes effective, in spite of measures which obstruct its operation. On the other hand, when this factor is feeble or wanting, curative treatment is not likely to prove of much avail. Evidently, in drawing conclusions respecting the curative effect of remedies allowance is to be made for this factor. The extent of its co-operation, doubtless, differs much in different cases, in some being sufficient in itself, and in others either considerable, or moderate, or slight.

The doctrine of self-limitation bears on the climatic and other measures entering into the hygienic treatment of cases of phthisis with not less force than on the employment of drugs. As regards climate, is there a practical theorem more perplexing to the practitioner of medicine than that of selecting the best resorts for phthisical patients, provided the selection be made on the basis of an impartial consideration of the reported results of climatic agencies in different situations? Underlying the exaggerations on the one hand, and on the other hand the depreciations of particular climatic resorts, founded on the different results in a few cases, is the factor of unknown power, self-limitation, the existence of which is generally ignored. Here is the explanation, at least in part, of the discrepancies of testimony concerning the results of climatic influences in different situations.

I forego reference to topics relating to the subject of this paper other than those briefly adverted to, feeling that I may have already overstepped the privilege of an invited guest. In conclusion, it must be admitted that the characteristics of the medical practice of to-day have resulted, in no small measure, from the knowledge which has been acquired of the natural history of diseases. And the practical applications of this knowledge have had relation especially to the doctrine of self-limitation. Bigelow, when he distinguished certain diseases as self-limited, probably had but a faint apprehension of the scope of this well-chosen term. The boundaries of its fullest extension have yet to be ascertained. Much knowledge of the natural history of diseases still remains to be acquired. It could hardly have been conjectured by Bigelow, when his discourse was written, that phthisis would be included among the self-limited diseases. The extent of influence attributable to self-limitation in this disease is by no means as yet ascertained. There is ample room for observations bearing on this point of inquiry. Impressed with the importance of clinical studies having this direction, I cannot forbear the remark that they promised more in the way of practical utility than has hitherto been derived from the discussion of the histologico-pathological questions which, of late years, have engrossed so much attention and occupied so large a space in medical literature.

ON THE USE OF VENESECTION IN CASES OF HEART DISEASE.*

By BEDFORD FENWICK, M.D., M.R.C.P., Assistant-Physician to the City of London Hospital for Diseases of the Chest, Pathologist to the Hospital for Women, Soho Square.

"It would be difficult," wrote Dr. Marshall Hall nearly sixty years ago, "to determine whether greater injury has risen in the practice of physic from undue or from inefficient bleeding. To neglect the full use of this most important of our remedies when it is required, or to institute it when it is not so, is equally to endanger the safety of the patient." When that celebrated teacher and practical physician uttered these weighty words, he could proceed to say: "It sometimes requires no little boldness to abstain from the use of the lancet. Bloodletting is not only the most powerful but the most generally used of all our remedies." How essentially and widely different our teaching and our practice is now need hardly be insisted on. A distinguished practitioner told me the other day that he had never drawn an ounce of blood or even seen a cupping-glass in all his life. A clinical teacher will name twelve drugs as useful in heart disease, but never once, perhaps, suggest a single leech. In fact we seem to shrink from the lancet as if it were an assassin's dagger, and to look upon the bleeding basin and measuring tube as murderous relics of a bygone and a barbarous age. I verily believe that the whole question of venesection in disease has yet to be settled upon a scientific basis. I only hope to treat it as regards affections of the chest, and at present I would only draw attention to the immense benefit derived from its discriminate use in cases of heart disease. I hope then to be able to show that in venesection, rightly used, we indeed have a "most important," a "most powerful" remedy; and I need hardly add, perhaps, a most neglected and far from a "most generally used" one. It may not be altogether uninstructive to tell how this great truth was forced upon my attention; because, brought up like most men nowadays in the strictest sect of the anti-venesectionists, I frankly confess that I was wont to read accounts of how our fathers were bled semi-annually or oftener, with a sense of quiet satisfaction at our own much greater wisdom.

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* Read before the Hunterian Society.

Case 1. Albert L——was admitted into the London Hospital under the care of Dr. Andrew Clark, when I was acting as his house-physician. He was twenty-three years old and had suffered from rheumatic fever. On admission he was very ill. Stenosis of the mitral orifice and incompetence of the aortic valves with œdema of both lungs were diagnosed. There was very considerable dyspnœa and general œdema, but no marked cyanosis or turgescence of the jugular veins. The urine was very scanty, and despite all our remedial efforts did not increase in quantity. In fact the kidneys seemed "clogged." Digitalis, ether, and senega were given in a mixture three times a day. The bowels and the skin were kept freely acting. He was kept at rest in bed on restricted diet. The lungs certainly at first cleared up somewhat, but at the end of a month his general state was none the better, but rather the worse. Then the urine became scantier, the œdema increased, he became drowsy, and coma seemed supervening. I was going round the ward late at night and was just passing the man thinking to myself "no more to be done there," when it suddenly struck me to get a tracing of his pulse. In adjusting the sphygmograph the patient slightly roused, threw up his other hand, and struck his nose heavily. It at once began to bleed. Thinking that in his state it could do him no harm and would probably stop at once, I put a towel under his cheek and went on with my work. Having leisurely taken about half a dozen tracings I removed the instrument and fixed my slides. I was then surprised to observe that the last one or two tracings, were wonderfully steadier, more even and regular throughout than the first one or two. Involuntarily I went back to the bed. The towel under the man's cheek was soaked right through with blood. He must have lost at least twelve or fourteen ounces, and the bleeding must have been very rapid while it lasted, for it had now ceased. He lay there looking at me wide awake and perfectly conscious, breathing quietly, with soft, slightly jerking pulse, and calmly said that he had had a good sleep, and felt better for it. Next morning I went in at an early hour to see him. He was sitting up in bed and complained bitterly of being kept there. He said he had been passing urine all night long. His pulse was still soft, and his breathing quiet, and for him wonderfully easy. In less than a week the œdema was perfectly gone, his pulse was 80, his respiration 24, his appetite was becoming voracious; and he insisted upon returning home, feeling better he said, than he had done for months. The ridiculous side of the story remains to be told. No one had noticed the bleeding except myself, and I never thought of naming it. I afterward heard, however, that his rapid recovery was attributed both by himself and his fellow-patients to the mysterious clock-work operation performed on him that midnight by the magical sphygmograph.

Now, I venture to consider that this case is a very important one. Many practical physicians would and do say, if there is great blueness in the face, or pulsation of the jugular veins, or such like evidence of obstruction to the passage of the blood through the right heart—bleed, to remove part of the excessive forward pressure. But there they stop; and here we had no cyanosis, no jugular distention. We had, however, evident blood stasis in the cerebral and renal organs ; and it will not be denied, I think, that the epistaxis saved the patient's life. It is perfectly plain, therefore, that we imperatively need, and must have, some definite scientific principles laid down applicable to all cases of heart disease. In attempting to do this, which I cannot find has ever been done before, I deeply feel my own incompetency to the task, and, indeed, attempt it here not by any means with the hope of settling the question, but rather of raising it as a matter of most vital interest to every patient with heart disease, and to every practitioner who may have to treat such a case. And first with regard to chronic valvular disease, of which we have naturally two great classes, those with contraction and those with insufficiency of the valves. In both classes we have one common sequence to ward off, the onset of dilatation ; and one common danger to guard against, the occurrence of fatty degeneration of the muscular walls. I need hardly point out here that loss of blood is a most common cause of fatty degeneration, and that once this fatal metamorphosis has commenced dilatation rapidly ensues. I may, however, mention that I have observed that fatty degenerations seem to occur, as a rule, much earlier, and to a more extreme degree in cases of incompetency of the valves than in cases of stenosis of their orifices, from which it follows that we must bleed more carefully, and less often in cases of valvular incompetency than in cases of stenosis. With regard, now, to the latter class, common-sense would almost seem to dictate the advisability of keeping the blood to be forced through an abnormally small opening abnormally small in quantity. Now, probably, every practitioner of any standing knows how cases of mitral stenosis, for example, may go on in comfort and fairly good health year after year, and always seem rather anæmic, and how a single indiscretion in diet ; or a trivial attack of bronchitis, will so upset the evenly balanced circulation as to bring the patient in a few hours into grave peril of his life. I am firmly convinced that in such cases venesection is invaluable, and that on the slightest indication that the balance is trembling we shall only and alone do justice to our patient if we remove the cause by removing blood ; and it is wonderful how little need be taken to give rapid and often long-continued relief. Therefore, having regard also to our foe, fatty degeneration, I would venture to suggest this clear rule—in cases of stenosis, if necessary, bleed at once ; bleed often, if requisite, but take little each time.

Case 2. Mary R——, aged fifteen, was admitted into the London Hospital in July, 1879, under the care of Dr. Andrew Clark, suffering from intense dyspnœa and cyanosis. The extremities were cold ; there was considerable œdema of the legs. The urine was very scanty. The pulse was scarcely perceptible though the heart's action was powerful. There was a presystolic thrill and murmur audible at the apex, and a systolic bruit at the base.

On July 10th, in addition to the above symptoms, she became very drowsy and hard to rouse, and it seemed probable that coma would supervene. She was bled from the right arm to the amount of four ounces and a half, when she roused herself and declared she felt much better. The breathing certainly was easier, and the lips became less blue, and the pulse softer and distinctly fuller. On the following day, however, dyspnœa came on again, and she was bled from the left arm to three ounces, when she expressed herself as feeling much relieved. A rapid increase in the daily quantity of urine at once began, and the œdema quickly diminished. She, however, felt so well that, against orders, she got out of bed, walked about the ward in an undressed state, and caught cold. Acute bronchitis set in, and the dyspnœa returned. On the 19th she was accordingly bled from the right arm to three ounces, with great relief to the breathing. The bronchial trouble rapidly cleared up, and she declared that she felt better than she had done for months. I was invalided myself, and she passed into the charge of a very able locum tenens. He, however, did not believe in venesection, and when on the 29th, after fresh exposure and a fresh cold, she sank into the same state as described on July 10th, she was not bled. She became comatose, and died the same evening.

The post-mortem revealed the accuracy of the diagnosis—a very extreme degree of mitral and aortic stenosis being found. As on every occasion when blood was removed, the patient was in urgent danger, and as each time only a small quantity was taken, and yet nevertheless each time with great relief, the whole case, I think, amply supports the practical lesson that I above pointed out. Latterly, I have only used leeches or cupping to remove blood directly from the cardiac region in cases where stenosis existed. I imagine that we obtain thereby more certain and more rapid results with a more accurate loss of blood than when venesection from the arm is resorted to. Still this is a matter of such great practical importance to the patient's welfare, and to our own success, that I feel bound to state distinctly some reasons for my judgment: 1. The patient, and the patient's friends, usually object less when leeching or cupping is suggested, than when "bleeding" is proposed, and they are less alarmed at a local application to the seat of disease than at the procedure necessary to open a vein and keep it bleeding. 2. The quantity of blood to be abstracted can be more accurately measured and controlled, and is generally much more easily obtained in cases of advanced stenosis by local than by brachial venesection. 3. Even as, like all practical men, I give a hypodermic injection of morphia at the seat of pain, although I cannot explain why its insertion there should give so much greater and more rapid relief than when introduced into the same blood at a distance, so I cannot explain why a little blood removed from the cardiac region should afford greater and quicker relief than is derived by the abstraction of even a somewhat larger quantity from the arm. I do the former and leave the latter undone in these cases, because I am convinced of the great practical truth that thereby greater good is gained.

Case 3. William H——, aged fifteen, was admitted into the London Hospital, in 1880, suffering from contracted mitral and aortic orifices, dilated left ventricle, and bronchitis. A mixture, containing digitalis, ether, squill, and senega, was given. Absolute rest in bed and restricted fluid diet was ordered. He improved somewhat, but very slowly; but at the beginning of March he began to suffer from increasing dyspnœa, and became rather cyanosed. On March 4th his breathing was rapid; he was drowsy and hard to rouse, his pulse was scarcely perceptible; while his heart's action was labored, heaving and irregular; his face and hands were covered with a cold sweat; his breath was cool; he seemed moribund. I put a number of leeches on the cardiac region, and they were very freely fomented. When they had bled to about six ounces, he roused himself a little and said that the pain at his heart was almost gone. In an hour or two his pulse was 80, weak still, but decidedly fuller than it had been for days past. I now increased the dose of the infusion of digitalis from three to four fluid drachms thrice a day. And I may here say how often I have been astonished to find how drugs which had been given for days or weeks without apparent benefit, as soon as even a little blood has been removed, seem at once to assert their power again. The patient now rapidly improved. In a week he was out of bed; and on March 23d he was discharged, feeling better, he said, than he had done for months past. I might easily multiply cases, but I think these amply illustrate the principle I desire to enforce.

With regard now to incompetency of the valves. Here we have, I believe, a more dangerous form of disease. For I am convinced that we have in such cases a greater tendency to the early occurrence of dilatation, and therefore of sudden death. And so it appears to me that we should only bleed in such cases when there is urgent dyspnœa, or other evidence of danger. Further, that then we should bleed boldly from the arm till the danger is removed, and for fear of inducing a state of fatty degeneration of the already weakened muscular walls, that, if possible, the bleeding should not be repeated. For in this class of cases we do not want to keep up a permanent effect—that is to say, a constant restriction of the quantity of blood in the body; but we have to counteract, and suddenly may be, an imminent peril. That venesection, however judiciously used, is most beneficial in these cases is amply evidenced by such as the following:

Case 4. Thomas C—— was admitted into the London Hospital on May 21st, 1867, under the care of Dr. Ramskill. On entering the hospital he was found to be suffering from aortic regurgitation, emphysema, and acute bronchitis. His urine was albuminous. At 3 P.M. on the day of admission his face and neck were livid; his eyeballs projected, and his lips were bloated looking. The veins of his neck were very much distended. His skin was perspiring and felt cold. His pulse was small, irregular, and quick. Respiration forty a minute, and his breathing was so labored and quick that he could hardly speak. At midnight on the day of admission he was much worse; his face was livid, his breathing gasping. His face was covered with cold sweat, and his pulse could hardly be felt. He was bled to sixteen ounces, and at once he expressed himself as feeling relieved. His breathing in the course of an hour became much freer, and he was able to sleep a little. Next day he looked much better; he appeared altogether a different man. His pulse was still very irregular and quick, but his respiration was slower. He continued to improve and left the hospital very much relieved. He returned in two months in much the same state as before. He was bled to fifteen ounces, with considerable temporary relief, but died suddenly five days afterward.

Case 5. "A costermonger,* aged sixty-two, was admitted, under the care of Dr. Herbert Davies, suffering from tricuspid incompetency and dilated right heart. He was extremely livid in the face; it might fairly be said to be of a purple color. The superficial veins were dilated. The dyspnœa was so great that he could not lie down. He sat on the edge of the bed, nodding, in a kind of stupor, the whole day long. Expectorant medicines were tried without any relief, and the dyspnœa increasing every day, he was bled to fourteen ounces. He expressed himself as much relieved, and there was a marked decrease in the lividity. The dyspnœa was much relieved. He felt so much better that he insisted upon being discharged from the hospital. After being out a few weeks he returned in much the same state as at first. He was again bled from the arm and greatly benefited, and he left the hospital. After about two months he was again admitted, under the care of Dr. Andrew Clark, in even a worse condition than before. He was bled again, but without relief, and he died very soon after."

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* *Medical Times and Gazette*, Dec. 18th, 1869, p. 707.

In each of these cases the post-mortem revealed considerable ventrical dilatation. Besides the above, Dr. Sutton quotes other illustrative cases, and Dr. Dickinson has recorded one in the Pathological Society's Transactions. I would, however, while fully recognizing the great benefit obtained in the above cases, point out that a sudden death in each followed rapidly on a venesection. In private practice the chances would be that in such a case the fatal result would be laid on the doctor's shoulders; and therefore, for a double reason—for the practitioner's as well as the patient's welfare—the rule above suggested should be kept in mind till a better one is laid down for venesection in cases of valvular incompetency.

Next, with regard to acute pericarditis and endocarditis. I have not had the opportunity of using venesection in many such cases, but where I have done so I have invariably bled by cupping the cardiac region, and always with good result—so successfully, indeed, as to make me believe that if this measure be taken at the onset of the disease it will very often if not always cut the attack short, or at least greatly mitigate its severity.

Case 6. Thomas H——, aged twenty-eight, was admitted under the care of Dr. Clark, suffering from dyspnœa and a slight grasping pain over the cardiac region. The heart's action was rapid and excited, and there was a rough, rubbing friction sound audible over the whole cardiac area. He was cupped at once to eight ounces, and expressed himself greatly relieved. The next morning the heart's action was quiet and regular, the rubbing sound had completely disappeared, and no evidence of effusion having occurred ever showed itself.

Finally, with regard to that troublesome symptom in heart cases—pain more or less severe, more or less persistent in the cardiac region—I have found nothing give such complete and rapid relief as the local abstraction of blood. Whether the symptom arises from local hyperæmia or not I do not profess to know, but of the great practical value of the remedy here I am firmly convinced.

Case 7. A young gentleman was brought to me a few weeks ago. He had been seen by several eminent specialists, and was, as I afterward found out, under the care of a justly distinguished practitioner. He had old mitral valve disease, but for some weeks past had suffered from extreme aching and often agonizing pain localized to the cardiac area. I could detect no sign of pericarditis. The temperature was only 99° F. There was no tenderness on pressure, no herpes; in fact, there was nothing to account for the pain. His parents and friends were much depressed because blisters and poultices, ether spray and galvanism, and a host of other remedies and drugs had been tried, but without the slightest alleviation of the pain. I prescribed a mixture containing belladonna and digitalis, and recommended that he should be cupped to seven ounces over the cardiac area. I have since heard that this was done with complete and immediate, and till now permanent, relief from pain.

To summarize, then, I would conclude that :

1. In cases of valvular stenosis, if dyspnœa or pain or urgent symptoms be present, bleeding is generally useful ; that it appears to be better to bleed often if necessary, but to take only a small quantity each time, and this by means of leeches or the cupping glass direct from the cardiac region.
2. In cases of valvular incompetency, if urgent dyspnœa or cyanosis or stupor be present, it appears best to bleed freely from the arm to about sixteen or twenty ounces if necessary, and if possible once for all.
3. In cases of acute pericarditis and endocarditis the attack may possibly be cut short by freely cupping the cardiac region at once.
4. In cases of cardialgia, without any evident cause, leeching or cupping over the heart's area will probably give relief.—*Lancet.*

WEST ST., Finsbury Circus, E. C.

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REVIEWS.

THE AMERICAN JOURNAL OF PHYSIOLOGY. Edited by D. H. FERNANDES, M.D. Vol. 1, No. 1. Ootober, 1882.

Bravo ! America also is to have a physiological journal, or is about to try and have one. The evidence of this is so far small, but, as tall oaks from little acorns grow, who can predict the future of this ambitious little periodical ? It does not come from "the great cities," where are supposed to reside all who know anything of practical physiology, but from the West ; from a small, but ambitious little city, Indianapolis, Ind. All wish the infant well. It needs nutrition, so give it an abundance.

PRACTICAL LABORATORY COURSE IN MEDICAL CHEMISTRY. By JOHN C. DRAPER, M.D., LL.D., Professor of Chemistry in the Medical Department University of New York. New York : Wm. Wood & Co.

This little manual gives in a most condensed form the outlines of a practical laboratory course. To students at college and to physicians wishing to review their college work it is very excellent. The book has a melancholy interest in the fact that, soon after its appearance, its author died, after a five days' illness of double pleurisy.

NOTE.—List of books received is too long for this issue ; it will appear next week.

THE JOURNAL OF CUTANEOUS AND VENEREAL DISEASES.

This is a new candidate for professional favor, whose first appearance was made in October. It is edited by Drs. Henry G. Piffard and Prince A. Morrow, two well-known dermatologists of New York, under whose management it is sure to be well conducted. It is issued monthly, at $2.50 per annum, the publishers being Wm. Wood & Co.

THE NORTH AMERICAN REVIEW for December commands attention no less by the eminence of its contributors than by the value and timeliness of its table of contents. First, there is a symposium on "The Health of American Women," regarded from three distinct points of view: Dr. Dio Lewis considers the question as it is affected by the prevailing style of feminine attire, especially by the practice of tight lacing; Mrs. Elizabeth Cady Stanton points out the many injurious influences of social environment; and Dr. James Read Chadwick sets forth the effects of education, climate and food, and finally discusses the question whether the modification produced in the European human type by transfer to America lessens the fertility of women. Gov. Buren R. Sherman, of Iowa, writes of the "Constitutional Prohibition" of the liquor traffic in that State, and maintains that the measure is in entire accord with the traditions of the original settlers, and approved by men of all political parties and all nationalities. General Grant, in an article entitled "An Undeserved Stigma," states the facts of Gen. Fitz-John Porter's case, and argues that the sentence of the court martial that cashiered him was based on a misconception of the essential circumstances. Richard A. Proctor writes of "The Influence of Food on Civilization," discussing with much learning and force some of the most interesting sociological problems of the present day and of the near future. Prof. Fisher, of Yale College, in defining the causes of "The Decline of Clerical Authority," holds that this decline, which affects the status of church and minister only as a part or function of the secular State, is by no means to be regretted, and that the spiritual influence of the church and its ministry is to-day greater than of old. Finally, there is a symposium upon the conditions of "Success on the Stage," the contributors being six of our most prominent actors—John McCullough, Joseph Jefferson, Madame Modjeska, Lawrence Barrett, Maggiè Mitchell and William Warren.

CEREBRAL HYPERÆMIA — DOES IT EXIST? A Consideration of some of the Views of DR. WILLIAM A. HAMMOND. By C. F. BUCKLEY, B.A., M.D., formerly Superintendent of Haydock Lodge Asylum, England. 16mo, pp. 129. New York: G. P. Putnam's Sons, 1882.

This is one of the most foolish and silly productions which has been issued for many years. It is marvellous that any American house could have so little judgment as to reproduce it. Any medical adviser of respectability could have presented any such foolish exposé on the part of an American republisher.

Why the author should address his criticisms against Dr. Hammond is not apparent to any one, unless there be some personal, and therefore unworthy, motive. Surely no one can justly attack Dr. Hammond for the claim of there being such conditions as physiological or pathological hyperæmia. This claim is now made, and the conviction entertained by almost every fairly prepared physician. Dr. Hammond has written well on the subject, but cerebral hyperæmia, physiological and pathological in character, has been recognized before either Dr. Hammond or his critic was born.

One is driven to belive that Dr. Buckley is himself profoundly ignorant on this subject. To deny that there is a cereral hyperæmia is to go back to the days of ignorance and stupidity, when Monroe and his satellites claimed that the quantity of blood in the cranium could not vary, because the contents of the cranium being incompressible no force that the heart could exert on the contents of an air tight case could alter the amount of blood sent to the head. But if one will come away from the darkness of the past century to the light of the present, to the views of Magendie and the actual demonstrations of Doulers, he would be ashamed, or ought to be ashamed, to advocate such views as the author of this little book has placed upon record. Every physician who assumes the *rôle* of author ought to know that the cerebro spinal fluid regulates the blood supply of the head; that as this fluid recedes from the head the blood is increased in the cranium; and as it increases in the head the cranial blood supply is diminished. Any cause or agent disturbing these hydrostatic forces or this hydrostatic equilibrium must disturb the cranial blood supply. The lymph in the peri-vascular spaces also changes the amount of blood sent to the cranium.

When all these facts were demonstrated by Doulers so completely that any one looking through the glass window which (after trephining) he placed in the cranial aperture of each animal experimented upon could see the absolute correctness of his teachings, it was impossible to entertain a doubt any longer. Doulers' experiments were proofs.

When Dr. Buckley is foolish enough to write what he has written, it shows conclusively that he does not know even the A. B. C. of the subject. He should go back to the medical nursery to be taught, and not intrude into the field of criticism until he is strong enough to sustain himself and to save himself from the injury of a fall, induced by any one who pleases to trip him up. One might as sensibly deny any demonstrable fact as to deny the fact of physiological and pathological cerebral hyperæmia.

The entire book is absurd and untrue, from its commencement to its close.

TREATISE ON THE PHYSIOLOGICAL AND THERAPEUTIC ACTION OF THE SULPHATE OF QUINIA. By OTIS FREDERICK MANSON, M.D., Professor of Physiology and Pathology in the Medical College of Virginia, etc. Philadelphia; J. B. Lippincott & Co. 1882. 12mo, pp. 164. Price, $1.

This work has been very generally noticed by the medical press. It has not been reviewed by any portion of it. The absence of all analytical criticism, and the presence of that vague, general commendation which characterizes the "book notices" of unread volumes, betray the fact that the work has escaped review. This is not strange to those familiar with the custom in the offices of periodicals, of giving brief, and often unmeaning "notices" to the shoal of small offspring throw from a prolific press; but it is strange that a work dealing with so important a subject—a subject second to none in therapeutic importance—should be thrown aside, and accorded, at best, nothing more than brief or diffuse laudation: notices couched in such language as to really signify nothing, or, if anything, only a desire to say something kind or something complimentary to a new-born author, and to the house through which he has been introduced to the public.

A new work on quinine deserves something more than this. It should at least be read before a "notice" of it is written.

The style of the author is, as a rule, fair, though his diction betrays, not infrequently, great haste and carelessness in composition. The book opens with a grammatical error in the first line. The author writes generally in the first person plural, but he often forgets the style assumed. On the first page he writes in the first person plural; on the last page in the first person singular, and in the intermediate pages, sometimes in one person and then again in another. This is not a cardinal fault; it is one common to many authors in their first and often in their last efforts; still it is a fault that a reviewer, in justice to an author, should certainly indicate.

The work is, of course, only a compilation; there is no claim to any originality in its composition, and the only original matter manifest is that represented by a few "cases" narrated to fortify or illustrate some special position or view of the author; or that in which is described some of the many gratuitous assumptions in regard to the *modus operandi* of quinine in its physiological or therapeutical relations.

As a compilation, the author cites chiefly the views of authorities belonging to the latter part of the last or the early portion of the present century. Senac, Maston, Cleghorn, Chomel, Burserius, Magendie, Giacomini, Pelletier, Caventou, and many other authors, quoted by the author, entertained views which are, of course, interesting in an historical sense, but they cannot be quoted properly at the present time as fair exponents of the truth, or of the most accepted modern teaching. Researches of the most valuable character have, since the publication of such views, been made by Eulenberg, Heubach, Küchenmeister, Chirone, Binz, Manassein, and others, and these teachings certainly have a right to consideration in any modern work on quinine; the author of the volume under review does not even allude to them.

While the views of many physicians abroad are carefully given, and those of American physicians of the past century and the early portion of the present (when so little of what is now known was known), the author fails entirely to give the testimony of his American contemporaries. Many of these are justly prominent, and their views are, to say the least, as valuable as those of physicians, who, whether abroad or at home, wrote a generation ago. Every physician in this country has had a large experience with quinine, but the views of all of them are passed by without recognition. The elder Wood's book is mentioned, but not that of the younger; a volume of established value. These are all serious omissions and mar the value of a work, while they place at a disadvantage the judgment and justice of its writer.

The author believes that "the time has come when some definite conclusions can be formed" as to "the properties and *modus operandi* of quinine." He then quotes profusely from those authorities whom he believes to be best, but says of all their views as to the properties and *modus operandi* of quinine, that they "are entirely opposed to each other, and in many respects irreconcilable." He then says that though there be these irreconcilable differences as to the physiological action of quinine, that when "these contestants meet at the bedside, they are singularly unanimous." In proof of this he shows that physicians differ utterly as to the time, mode, dose and method of using quinine.

In regard to his own views as to the proper time for giving quinine in fever, he says "the acme of the exacerbation is *an unfavorable period for its administration;* that the *stomach* is then in its *most irritable condition*, often rejecting the *blandest fluids.* It is a period in which the *absorption* of the salt takes place with the *most difficulty* and in which its unpleasant effects on the brain are most *readily developed.* (Italics his own.) In another place, he says, "the presence of fever so far from contraindicating its use rationally invites its exhibition in doses increased in direct ratio with the elevation of the temperature."

While therefore the time has come, in the author's judgment, for giving definite conclusions in regard to the properties and *modus operandi* of quinine, it is a fact that in attempting to prove the truth of his claim, he shows, by original quotations, that his best authors differ endlessly as to their views of the physiological action of quinine; that in its therapeutical application, they differ even worse; and more than this he shows that he differs from himself.

The author is an optimist; he regards quinine as excellent not only in the periodical fevers, but in typhoid and typhus fevers; in erysipelas; in rheumatism, acute and chronic; in cerebro-spinal meningitis; cholera infantum, etc. In typhoid fever, he has found it to do best when malaria is present. In erysipelas traumatica, he gives quinine largely, and even amputates through the diseased tissues. He says that quinine induces sleep through "its action on the gray matter of the cerebral convolutions;" whatever that may mean. That "it confers *immunity* from the effects of the toxic agent, by *obtunding*, *stupefying*, and even *paralyzing* the centres of impressibility;" whatever that may mean. That it "removes disease, by rendering the nervous system insensible to the action of the morbific causes;" whatever that may mean. Quinine, he says, "is a paralyzant." That it so paralyzes "the centres" that impressions cannot be made upon them; "fatal things pass harmless by the paralyzed centre." That these paralyzed centres are "*in varying degrees of paresis!*" Such views are beyond criticism; they are not worthy of it. So far from quinine however being a paralyzer of the nerve centres, or, "a paralyzant," it is demonstrable to any one who will perform the experiment, that an animal so toxically dosed with quinine as to have all reflex action destroyed will, if placed in an uncomfortable position, easily and promptly turn over until comfort is secured; (Eulenberg). Voluntary motion (so impaired in paralysis) being undisturbed.

These views of the author in regard to paralysis induced by quinine being the explanation of the prophylactic or therapeutic action of the drug are wholly unsupportable by any rational facts, or credible testimony. They induce all readers to feel that he was seriously in error when he believed that "the time had arrived, when some definite conclusions can be formed on the *modus operandi* of quinine."

With every desire to commend and to recommend the work, it is impossible to do so. It is, indeed, impossible to find in it anything but a melancholy, tedious and prolific illustration of the antagonistic views that have been held in regard to the physiological action and therapeutical applications of quinine; with some most astounding personal views of the author; and an astonishing omission of all the recent facts and best teachings of modern science.

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MISCELLANEOUS.

Elegant Fly Blisters.—Limousin (of "cachet" renown) spreads it on thin, tough, unsized paper, and covers it with another piece of the same paper. Such a plaster is very supple, and can easily be provided with the necessary adhesive margin by slightly warming a sufficiently large piece of adhesive plaster and "stick" the fly blister on to it. Or, it may be applied to plaster skin with a little paste. To meet various indications, one side of the fly blister may be "camphorated," and either side applied to the skin. The paper is easily removed by merely moistening it with water.—*Repert. de Pharm.*

CAUSES OF TYPHOID FEVER.—A severe outbreak of typhoid fever which occurred last year at Nahant, a rocky peninsula near Boston, inhabited during the summer by a small number of very rich cottage owners, was followed by an investigation, of which the results are made public in an article by Mr. E. W. Bowditch, in the *Boston Medical and Surgical Journal.* In such cases contamination of drinking-water is usually the principal cause of the spread of the disease, and the wells and cisterns which supply the houses were first examined. Water was taken from one hundred and ninety of these and analyzed. Eight of the samples were pronounced "excellent," and seventy-one others "permissible" or "good." One hundred and eleven were classed as "suspicious," "very suspicious," or "bad." About eighty cases of fever occurred, nearly all of which could be accounted for by the actual condition of the drinking water used in the houses inhabited by the patients. In a few others the filthy surroundings furnished a probable source of infection, although the water appeared pure, as, in one instance, where analysis failed to detect any serious pollution in water taken from a well situated within ten feet of one leaching cesspool and fifteen feet of another, both overflowing, and of course ready to furnish an occasional supply to the well during dry seasons or under other circumstances. One or two more were probably explained by the fact that the ice used in the household was brought from a foul pond in the vicinity; and only one seemed quite inexplicable, unless perhaps the infection might have been brought by milk contained in cans which had been rinsed in foul water. Mr. Bowditch's suspicion, that the infection was communicated in certain cases by contaminated ice, is strengthened by the fact that a very severe and fatal epidemic of typhoid fever was unquestionably caused in this way not long ago at a seashore hotel in New England; and it is worth asking whether the public authority might not be employed with advantage in exercising some sort of surveillance over the collection and sale of an article which may become, and perhaps already is, far more dangerous than the trichinous pork or immature veal against which so many precautions are taken. In one place that we know of, says the *American Architect*, thousands of tons of ice are annually gathered at the very edge of an extensive and well-filled cemetery, which slopes somewhat rapidly toward the water; and we have seen the winter product of a little pool formed by the overflow of what was practically the drain of a cluster of squalid houses, regularly sold to customers.—*Scientific American.*

THE CONTAGIOUSNESS OF PULMONARY CONSUMPTION.—Dr. Herbert Davies, Consulting Physician to the London Hospital, and to the Royal Hospital for Diseases of the Chest, writes to a recent number of the *British Medical Journal*, giving some strong arguments against the contagious properties of pulmonary consumption. He quotes from a letter, written in 1867, by Mr. Edwards (resident medical officer of the Brompton Hospital for seventeen years), to Dr. R. Payne Cotton, in which he says that he remembers fifty-nine resident medical assistants, whose duration of office has averaged six months, all but two of whom are living, one dying from aneurism, and the other from some unknown cause. The present chaplain has held office for seventeen years, and his two predecessors are living. The matron has been resident for more than sixteen years, and the two former matrons are living. Of the nurses now in residence, one has been here twenty-four years; two, twelve years; one, eight years; one, seven; one six and a half, and one five years. No under-nurse has died of phthisis. The head nurses sleep each in a room containing fifty patients, and two only are known to have died—one from apoplexy, and one, some time after she had left the hospital, and after an unhappy married life, of phthisis. All but two of the physicians who have attended the in and out patients during seventeen years are living. One died from causes unknown, the other from causes unconnected with diseases of the lung.

WE have received the following interesting and hitherto unpublished letter from General Washington to his intimate friend and physician, Dr. James Craik, from Dr. Weir Mitchell, to whom it was sent by Mr. George Bancroft, the historian, with the accompanying note:

"Here, my dear Doctor, you see the relation between physician and friend in the last century. The letter is enough to wring the heart for the sufferings of the best of mortals.

"Ever yours,
"GEORGE BANCROFT."

"MOUNT VERNON, August 4th, 1788.

"DEAR SIR: With this letter you will receive the horse I promised you, and which I now beg your acceptance of. He is not in such good order as I could wish, but as good as my means would place him.

"I also send you thirty pounds cash for one year's allowance for the schooling of your son, G. W. I wish it was in my power to send the like sum for the other year which is now about or near due, and that I could discharge your amount for attendance and ministerings to the sick of my family, but it really is not, for with much truth I can say, I never felt the want of money so sensibly since I was a boy of fifteen years old, as I have done for the last twelve months and probably shall do for twelve months to come.

"Sincerely and affectionately,
"I am, yours, etc.,
"GEORGE WASHINGTON."

—*Medical News.*

HÆMOPHILIA.—Hæmophilia is a very learned-looking word, and, as it should do, it bespeaks a disease of which we know very little. The malady, which from time to time so unhappily incapacitates H. R. H. Prince Leopold, is one which most unprofessional people think to be due to some abnormal condition of the skin. A person who bleeds easily is said to have only one skin, in place of the proper number which it must puzzle many to tell. It is not, however, any such malformation, but what it is is much less certain. Such persons bleed easily from not only the skin when wounded, but from the gums and mouth, and mucous membranes. They also bruise easily, and in the same way it is probable that the troubles in the joints from which they suffer are to be explained by supposing some slight injury to the synovial membrane, and a subsequent escape of fluid to the cavity of the joint. We do not know what is the malformation or disease which predisposes to such an easy escape of the blood from its proper channels. The chemical constitution of the blood has been thought by some to be at fault, the smaller blood-vessels by others; but no chemical or microscopical investigations that have been conducted as yet have been anything but contradictory, and, therefore, have been without result. One curious fact, however, has been elicited from various observations that have been made; and this is, that it is hereditary to a marked degree, and that it is transmitted along the male much oftener than along the female line.—*British Medical Journal.*

MYOSITIS OSSIFICANS.—At a recent meeting of the Vienna Medical Society Professor Podrazki exhibited a soldier affected with the rare condition which has been termed myositis ossificans. Four weeks previously the man had applied for treatment, on account of an intense inflammation of the muscles on the front of the right upper arm, apparently set up by severe gymnastic exercise. The muscles were large, hard, and uneven, and the elbow-joint was fixed in flexion. The hardness was removed, and some increased mobility was obtained, by massage and and the application of cold. At the end of two weeks a hard, round, movable tumor developed in the flexor of the elbow, which was evidently due to an ossification of the brachialis anticus. At first it was movable, the upper part appeared to be cartilaginous, and it was evidently not connected with the periosteum. Podraski has seen, in the course of nineteen years, two cases in the practice of Pitha quite similar to this in their characters. In those two cases neither iodide of potassium, nor any other treatment adopted, had any influence. In a discussion which followed, Professor Weinlechner stated that he had twice seen similar small spots of ossification in the muscles on the front of the leg, due, in each case, to a traumatic cause. Kundrat expressed the opinion that some supposed exostoses on the thigh proceed from muscles. Their form and seat correspond to certain muscles. Their greater frequency in men, and especially in muscular individuals, suggest that their origin is traumatic. They constantly become adherent to bone in the course of their growth, and hence are commonly thought to be primary exostoses.

PUERPERAL FEVER.—In the *Edinburgh Medical Journal* for October is contained an interesting and short paper by Mr. John Lowe, on "Puerperal Fever: its Treatment and Prevention," in which occurs the following judicious expression of views in regard to treatment:

"I am strongly of opinion that by early and repeated aseptic intra-uterine injections, a rapidly acting cholagogue, washing out the bladder, if necessary, with some asceptic solution, and the timely and liberal use of stimulants, will avert death in many instances. It is no use giving the nurse instructions to wash out the uterus; we must do so ourselves by means of a long tube in the uterine cavity itself. Ammonia and brandy I regard as the medicines for the disease; indeed, when food is refused, brandy is not only most grateful to the patient, but is peculiarly well adapted to supply the place of ordinary food, and no amount of fever or other symptom contraindicates stimulation when changes so destructive to the vital fluids and tissues of the body are in terribly rapid progress. To give aconite or veratrum viride in such cases is, in my opinion, as unscientific as it is useless ; and yet these remedies have been vaunted and are actually used by men of undoubted ability and eminence. To get rid of a fermentative poison from the blood, we must adopt some such practice as I have indicated, and not stop to theorize about the physics of the circulation. We must, in other words, support vitality and eradicate the poison. That salicylates and sulpho-carbolates taken internally do not rectify the turbid urine in puerperal fever, I am convinced from experience ; and I would strongly urge that all depressant remedies are both hurtful and dangerous."

The use of carbolic spray, and irrigation of the uterus and vagina with carbolic solution, immediately after labor, are considered important means for the prevention of puerperal septic poisoning.

A SIMPLE METHOD OF INTRODUCING MEDICINAL SUBSTANCES INTO THE MIDDLE EAR, AND OF MAKING APPLICATION TO THE NASAL MUCOUS MEMBRANE.—M. PURICELLI (*Rundschau*, No. 7, 1882) recommends, in order to retain substances in contact with the nasal mucous membrane, that the patient should pronounce the vowel A, at the same time throwing the head back and breathing through the mouth, thus preventing all communication between the nasal fossæ and pharynx.

If the patient pronounces R while a stream of air is forced through the nose, the liquid will penetrate to the middle ear.—*Rev. Mens. de Laryngol., d' Otol. et de Rhinol.*, October 1st, 1882.

HOW IT FEELS TO BE STRANGULATED.—Dr. Græme M. Hammond, in the *Medical Record*, is of opinion that death by hanging is not so painful as the convulsions of the hero of the occasion might lead most people to believe.

To make sure, he caused himself to be partly strangled in a friendly manner, and thus describes his sensations :

"My own experience was somewhat similar to that obtained by other observers, except in the fact that strangulation was not carried to that point at which respiration ceases entirely. My object was more particularly to demonstrate the painlessness of the operation than to show the existence of any new sensations. With the assistance of two medical friends, I was partially strangled in the following manner : After being placed in a sitting position in a chair, a towel was passed around my neck and the ends twisted together. Of course with every twist of the towel very forcible compression was made on the entire circumference of the neck. One of my friends was intrusted with the operation of twisting the towel, while the other was stationed in front of me, in order that he might watch my face, and at the same time make the necessary tests of the cessation of sensibility.

"My sensations from the first twist of the towel may be briefly stated as follows : I first noticed a sensation of warmth and tingling, beginning in the feet and quickly passing over the entire body ; vision partially disappeared, but there was no appearance of any colored lights. My head felt as if about to burst, and there was a confused roaring in the ears, such as is heard when the ear is placed against the opening of a shell. I suffered no loss of consciousness, and was fully able to tell my friend whether I felt any pain from the knife thrusts he was inflicting upon my hand. In one minute and twenty seconds from the commencement of the operation all sensibility was abolished. After a few minutes' rest, a second trial was made in the same manner as before. This was followed by symptoms similar in character to those mentioned in the first attempt, except that sensibility ceased in fifty-five seconds."

HEADACHE.—Dr. Haley says (*Australian Medical Journal*, of August 15th, 1881) that, as a rule, a dull, heavy headache, situated over the brows and accompanied by languor, chilliness, and a feeling of general discomfort, with distaste for food, which sometimes approaches to nausea, can be completely removed, in about ten minutes, by a two-grain dose of iodide of potassium dissolved in half a wineglassful of water, this being sipped so that the whole quantity may be consumed in about ten minutes.—*Glasgow Med. Journ.*

ESSENCE OF EUCALYPTUS AND COD-LIVER OIL.—Mr. Dusquesnel proposes to mask the disagreeable flavor of cod-liver oil by adding to it a minute quantity of the essence of eucalyptus. According to his note in the *Bulletin de Thérapeutique*, 1 per cent of the essence is quite sufficient for this purpose. It is probable that several other essential oils might be used for the same purpose, but the eucalyptus essence was preferred, probably on account of its beneficial therapeutic action in catarrh of the stomach, dyspepsia, and diseases of the respiratory organs.

PROGNOSIS IN DIABETES.—Dr. R. Schmitz, of Neuenahr, in *Wiener Med. Woch.* discusses six hundred cases of diabetes treated for the most part dietetically. He says the question of prognosis is determined by (1) the earliness of the discovery and treatment of the complaint; (2) the strictness with which the anti-diabetic regimen is observed; (3) the etiological factors; (4) the age of the patient; (5) the degree of immunity the patient enjoys when he chances to use sugar-breeding food. In early cases the prognosis is favorable. Diabetes depending on central nervous lesions or on grave chronic affections is serious; depending on worry, pain and grief, or on over-use of sugary food, it is less so. Gouty diabetes has the best prognosis. After the age of thirty the prognosis grows steadily worse. It is bad if sugar persists on an exclusive diet of fish and flesh. It is decidedly favorable if eggs, salads, and mild cheese can be taken without breeding sugar, which only reappears when fruits, starchy roots, starch or cane-sugar are taken.—*Lond. Pract.*

TARNIER'S METHOD OF PREVENTING PUERPERAL INFECTION.—"Even in 1856, when I was interne at the Maternité Hospital, the mortality was five per cent; this is now reduced to two per cent in hospital, and three-quarters of one per cent in the pavilion I had constructed a few years ago. Each patient there has a separate room, entered from without, so that a nurse can only pass from one to another by going outside into the open air. The furniture is of japanned iron; the floors, walls, and ceilings are of impermeable concrete. The mattresses and pillows are stuffed with cut chaff, which is burned after use in every single case. Instead of McIntosh sheets, one of brown paper, made impermeable by pitch, is used; this is burned after use." For the washing of the genitals he uses weak solutions of bichloride of mercury, being the best and most powerful germicide.—*Canada Jour. of Med. Science.*

Dr. Josef Pollak, in Devecser, reports the following case in the *Wien. Med. Presse*. He observed in a female infant, four days old, a not inconsiderable hæmorrhage from the vagina. The bleeding reappeared several times daily ; after the third day the discharge assumed a reddish-brown, and later a chocolate color, and ceased totally when the infant was nine days old. At the same time there was noticed a swelling of the mammæ, and on pressure a milk-like fluid oozed from them, drop by drop. The general health of the case just reported did not apparently suffer at all in consequence of the bleeding.—*The Medical Record.*

The figure of Dr. Benjamin Ward Richardson is unique in medicine. At present he is best known to the world as an ardent teetotaler and a sanitarian—sometimes a little whimsical, as when he propounded his Hygeia, or ideal city of health. But from this to conclude that Dr. Richardson is crotchety is quite a mistake. He has always held his own views and supported them ably. Born in the Midlands, he studied in Glasgow, and, from a remark in his Asclepiad, was evidently assistant to a general practitioner in the country in his early days. But he soon came to London, and took a prominent position as a scientific physician. He gained his Fellowship of the Royal Society by his researches into the causes of the fluidity of the blood, which he held to be largely due to the ammonia contained therein ; and he has always been the consistent advocate of ammonia freely administered in cases where a blood-clot is suspected to be forming in the cardiac chambers. For these researches he gained the Astley Cooper prize. For years Dr. Richardson gave lectures on various subjects to classes of medical men who gathered to his house, and was the most advanced physiologist of his day, before the regular trained physiologists like Burdon Sanderson or Michael Foster had sprung up. His name is indissolubly connected with the ether spray for producing local anæsthesia, as one contribution to practical medicine. Then he invented a painless knife in the form of a wheel-blade revolving so swiftly as to cut without inflicting pain, by means of which he sliced off pieces of the ears of rabbits while they continued nibbling leaves, showing how little they suffered from the amputation. But this came to no practical use.—*London Letter in Medical Times.*

Glass Covers for Dissecting Tables.—Dr. C. W. Cathcart, Lecturer on Anatomy in Surgeons' Hall, Royal College of Surgeons, Edinburgh, describes, in a recent number of the *Edinburgh Medical Journal,* that, on having to put a fresh cover to one of the dissecting-tables at Surgeons' Hall, he substituted thick glass for the zinc plating that had previously been employed for the purpose. It has answered so well, that Dr. Cathcart thinks it right that the method be submitted publicly to the notice of all lecturers, demonstrators, and others interested in the study of practical anatomy. The glass used is about half an inch thick, polished on one side, and ribbed or grooved longitudinally. The table is spread with soft putty, and the glass, cut to the exact size, is pressed evenly down upon it, with the polished side uppermost, one end of the table being slightly raised. The margins of the glass are secured with a border of lead or wood, which goes all round except at the lower end, where a wooden gutter is fixed to carry off fluids, which drain down along the grooves. The surface of the glass can be kept beautifully clean by simple wiping. With glass of half-inch thickness firmly imbedded in putty, any ordinary wear and tear need not be feared, although it would be unwise to test its strength by direct hammering. The price, with lead margin, runs to about 28s. per cover—that is, 12s. for glass, 4s. 6d. for putty, 5s. 6d. for lead, and 6s. for workman's time and wooden gutter. If the margin, which has been found practically unnecessary, were omitted, the cost would be considerably lessened, both for time and material. The consistence of the putty requires special attention. It should be so soft that it can readily adapt itself to the table and glass, and for this purpose requires a much larger proportion of oil than is necessary for ordinary glazing purposes ; probably, cement would do as well or better than putty, and it would be cheaper.

FOREIGN BODIES IN THE AIR-PASSAGES.—Dr. J. R. Weist (*Medical News*, June 17th), concludes a paper on this subject thus :

This paper was statistical, and contained generalizations from over one thousand cases which he had collected. The conclusions to which he had been led differed from those of most text-books, but were founded upon a careful comparison of the results obtained by prompt surgical interference and those which followed spontaneous expulsion. His conclusions were :

1. When a foreign body is lodged either in the larynx, trachea, or bronchia, the use of emetics, errhines, or similar means should not be employed, as they increase the sufferings of the patient, and do not increase his chances of recovery.

2. Inversion of the body and succussion, though sometimes useful, are dangerous, and should not be practised unless the windpipe has been previously opened.

3. The presence simply of a foreign body in the larynx, trachea, or bronchia, does not make bronchotomy necessary.

4. While a foreign body causes no dangerous symptoms, bronchotomy should not be performed.

5. While a foreign body remains fixed in the trachea or bronchia, as a general rule, bronchotomy should not be practised.

6. When symptoms of suffocation are present, or occur at frequent intervals, bronchotomy should be resorted to without delay.

7. When the foreign body is lodged in the larynx, there being no paroxysms of strangulation, but an increasing difficulty of respiration from œdema or inflammation, bronchotomy is demanded.

8. When the body is movable in the trachea, and excites frequent attacks of strangulation, bronchotomy should be performed.

THE TREATMENT OF TAPE-WORM.—Our eminent pharmacological expert, Dr. Squibb in the issue of his *Ephemeris* for November, 1882, offers some practical observations on the "treatment of tape-worm." His conclusion is that an emulsion of pumpkin seeds, and, this failing, the oleoresin of male fern, are as useful as any other remedies ; for, as we will presently learn, Dr. Squibb is most concerned in respect to the preparation of the patient, and the mode of administering the remedy. "Under ordinary good management," he maintains, "one parasiticide is about as good as another." His method of preparation consists in fasting and the administration of Seidlitz powders. "After a light dinner, near the middle of the day, the patient should take no food, but may drink freely of water." A Seidlitz powder is administered that evening, and, whether it acts or not, another is given on the following morning, after which the parasiticide is taken. Dr. Squibb's object in the exhibition of the saline laxative, he informs us, is to uncover the worm—to present the head to the action of the tæniafuge. The following is his mode of preparing the pumpkin seeds :

Four ounces must be well beaten in a mortar, half an ounce at a time, a few drops of water being added, until the whole is made into a paste. The shells should be retained, and not separated, as is usually done. The trituration is continued by the addition of water until a pint of emulsion is obtained. This quantity is given in three doses, the necessary quietude and forbearance of the stomach being secured by appropriate treatment. If the emulsion does not purge of itself, a dose of castor oil is given in a half hour after the last quantity, the worm coming away in the evacuation, which should, as Dr. Squibb informs us, be received in a vessel containing water to facilitate the proper examination of the parasite.

If the pumpkin-seed emulsion is rejected by vomiting, or fails to expel the worm, Squibb advises the oleoresin of male fern. The same mode of fasting and exhibition of a saline laxative are directed, after which the fern is administered in scruple doses every fifteen minutes (in capsules) until eight to twelve doses have been taken.—*News.*

RUSSIAN TEETH.—From a recent examination by Dr. Franzius of the teeth of six hundred and fifty soldiers in Russia, it appeared that two hundred and fifty-eight, or nearly forty per cent, had dental caries. He finds that of all the teeth, the third molar is most often affected ; such cases making up one half of all the cases. The teeth are affected in a certain successive order : first, the lower third molar is attacked, then the upper, then the lower fourth molar, and so on. The incisors and the canine teeth of the lower jaw stand last in the line. The durability of the upper teeth stands to that of the lower as three to two. The teeth in persons of fair complexion and hair are less durable than in those of dark complexion and hair (forty to thirty-seven per cent). Stature has a manifest influence on the durability of the teeth, which increases with decrease of height, and *vice versâ.* (Dr. Franzius seeks an explanation of this curious fact in a less perfect outer circulation in tall men than in short men.) The right teeth show a greater vitality than the left. The conditions of the soldier's life do not show any harmful influence on the state of the teeth.

CURIOUS EFFECT OF SCALP INJURY UPON THE HAIR.—The hair of a girl employed in the Elgin watch factory was caught in the machinery and violently pulled. From that time all of the new growth was white, and now the receding color has reached a point half way to the ends.

TROPIC FRUIT LAXATIVE.—According to a paper read before the Wisconsin Pharmaceutical Association, Tropic Fruit Laxative is a combination of jalap, senna, and tamarinds, covered with a coating of chocolate and sugar. The objection to this way of dispensing a confection of senna is that the laxative portion is liable to be worm-eaten, which cannot be noticed unless the coating is removed.

MEDICAL NEWS.

DRUG SUBSTITUTIONS.—The Drug Trade Association of Philadelphia has been investigating the charge that doctors' prescriptions are not properly filled by dispensing druggists. It was shown by analyses that much of the laudanum sold at retail is far below the standard set by the pharmacopœia. Allowing for the fine trade distinction between commercial and officinal laudanum, the one for sale over the counter, the other for use in compounding prescriptions, there were preparations in which the undergrade and cheaper commodity was used. Cinchonidia, was furnished where the prescription called for quinine; the sulphate of eserine was given where the bromide was required; and borax was sold for boracic acid. The difference in cost being five hundred per cent.

APOTHECARIES IN GERMANY.—The increase in the number of apothecaries in 1881 throughout the German empire was only twenty, and of this increase ten were in the kingdom of Prussia.

AN English workingman, just past the middle age found that his pipe, which for many years had been a great comfort to him, was beginning to seriously affect his nerves. Before giving it up, however, he determined to find out if there was no way by which he might continue to smoke without feeling its effects to an injurious extent. He accordingly wrote to a medical journal, and was recommended to fill the bowl of the pipe one third full of table-salt and press the tobacco hard down upon it, as in ordinary smoking. The result was very satisfactory. During the process of smoking the salt solidifies, while remaining porous and when the hardened lump is removed at the end of a day's smoking it is found to have absorbed so much of the oil of tobacco as to be deeply colored. The salt should be renewed daily.

WOMEN have distinguished themselves once more in the London University class-lists. The scholarship and gold medal for obstetrics are taken by a woman; two women are placed in the first class, one a student from Girton College; five more have gained second classes, and several others are in the third class.

OSTEOTOMY.—Dr. Margary has performed (*Revista Clinica di Bologna*), one hundred and thirty-two osteotomies in sixty-three subjects for diverse indications. Death resulted in one case only and in but two was there auchylosis. The Listerian dressings were used. The operations other than those mentioned had strikingly successful results.

SUBSIDY TO PASTEUR.—The French Minister of Agriculture has lately placed at the disposal of M. Pasteur a new sum of 50,000 fr. ($10,000), in order to continue his admirable investigations upon the contagious diseases of animals. The government had already granted to the illustrious savant, for the same object, 50,000 fr. in 1880 and 40,000 in 1881. The minister consulted a special committee, who, in view of the brilliant success obtained by Pasteur in his previous investigations, unanimously recommended a renewal of the grant.—*Les Mondes.*

PASTEUR'S RESEARCHES.—A letter was read at a recent meeting of the Académie des Sciences from M. Pasteur, giving an account of his progress in some researches in which he is at present engaged in the district of Vaucluse. He has gone there to investigate a disease of pigs, which, in one valley of the Rhone, has recently been fatal to 20,000. The disease is called "le rouge des porcs;" and M. Pasteur announces that he has discovered its cause to be a very minute organism, which in point of size resembles that of chicken cholera. It differs, however, in its physiological properties, since it has no action on fowls, but it is fatal to rabbits and pigs, especially to white pigs. M. Pasteur has convinced himself, by experiments, that one attack affords protection against another, and he has succeeded in inoculating pigs with organisms which have been weakened by culture, and in thus rendering these animals insusceptible.

REGULATING THE HEIGHT OF BUILDINGS IN LARGE CITIES.—Paris has a commission for regulating the height of buildings, which are graded to correspond to the width of the street upon which they front. Houses may be forty feet high on streets not less than twenty-five feet wide, exclusive of sidewalks. In no case are they permitted to be over sixty-five feet high, and only then when the streets are sixty-five feet wide or wider. The time is not far distant when some regulation of the kind will be necessary in New York.

DR. HENRY DRAPER, Professor of Chemistry in the medical department of the University of New York, died of double pleurisy, after five days' illness, Nov. 20th, 1882. He was, as a man, generous, genuine and true; as a physician, one eminently scientific and justly distinguished.——Damages for injuries brought about by drinking impure water have been obtained by a lawyer in England from the town in which he resided. The sum awarded him was $10,000. Such cases furnish a practical stimulus to sanitary science.——Dr. L. Duncan Bulkley commenced on the 11th of October his annual free course of lectures to practitioners and students, at the New York Hospital, on diseases of the skin, including syphilis. The first half of the hour each week is devoted to a didactic lecture illustrated with fine wax models, colored plates, etc, and the second half to clinical teaching.——Dr. McLean has begun a libel suit against the Detroit *Evening News* for $50,000. Damages are sought for supposed injuries to moral character.——The New York *Sanitary Engineer* has laudably undertaken to print as much as possible of the important information hitherto published in the National Board of Health Bulletin, whose publication has ceased and determined owing to the niggard parsimony of Congress. The *Sanitary Engineer*, apart from its own intrinsic merits, deserves the support of all physicians and sanitarians for its enterprise in the premises.——The new Medical College at Chicago, the College of Physicians and Surgeons, opens with a large class. Its fees are said to be only about one half as great as those of the other two regular colleges, to which fact is imputed some part of its prosperity.——At its late annual meeting the Wayne County (Detroit) Medical Society presented Dr. Wm. Brodie with a silvery soup (?) bowl and re-elected him president for the coming year.——At Harvard, prizes are offered annually for the best development of muscle. When will this be done for development of mind? The gymnasium is well enough, but the college is far better. ——THE TROUBLES IN LUNATIC ASYLUM MANAGEMENT.—Much scandal has been aroused over the management of the Central Lunatic Asylum at

Anchorage, Ky. It was charged that a system of "ducking" had been used, with fatal results in some cases. A judicial investigation has resulted in bringing indictments against several employés. It was shown that obsolete methods of treatment were employed. —— ASSOCIATION JOURNALS. —Dr. J. Milner Fothergill writes a long letter to the *Medical Times*, giving an account of the *British Medical Journal* and of the dissatisfaction at its management. Who could do better than Dr. Ernest Hart has done? or even as well?

THE JOHNS HOPKINS MEDICAL SCHOOL.—It is announced with some show of authority that the trustees of the Johns Hopkins Hospital design opening that institution, and the medical school to be established in connection with it, in the Fall of 1883. This announcement is somewhat surprising in view of the repeated statement that the hospital would not be ready for inauguration for five or six years at least. The authorities, however, have decided not to wait for the full completion of the extensive buildings, but to commence work as soon as the accommodations already provided can be rendered available. These consist of an administrative building, a male and a female pay ward, a kitchen, a nurses' home, an apothecary building, octagonal wards, an isolating ward, an autopsy building, a free dispensary, an amphitheatre, and a laundry. These, with the exception of the last, are already under roof, but no inside work has yet been done upon them. About $1,300,000, including cost of ground, has so far been spent on the buildings, which, when completed, will have a capacity for 400 patients. A site for a building for the medical school has been purchased in the vicinity of the hospital. The prospect for an early commencement of this institution, which is destined to reflect such honor upon Baltimore and to elevate so much the standard of medical education in this country, cannot but be gratifying to all whose minds are not blinded by personal interest. If we are to judge the character of the medical department by that of the academic already successfully under way, we may safely predict that in the inception of the Johns Hopkins Medical School, we will witness the assemblage and activity of a band of workers that will carry the fame of our city to the furthest limits of the civilized world.—*Md. Med. Jour.*——Dr. W. T. Belfield, Lecturer on Physiology in Rush Medical College, has been invited to deliver the Cartwright course of lectures in New York the coming winter. Dr. Belfield has accepted the honor, and will deliver the lectures near the holidays. They will probably be given to the study of disease germs and the recent investigations in this field.——The President has appointed George E. Waring, of Newport, R. I., a member of the National Board of Health, in place of Dr. Charles F. Folsom, of Massachusetts, resigned.——According to the *Columbus Medical Journal*, about 6000 new doctors are every spring thrown out to seek a living by absorbing a portion of the practice of those already in the field. By a recent calculation from admitted data, each doctor in the United States would have *two* paying patients, if they were equally divided. What are the new men to do?——Dr. C. C. Forbes, of Louisville, Ky., has accepted the position of Superintendent of the Arkansas Lunatic Asylum at Little Rock. Dr. Forbes was formerly Superintendent of the Central Asylum at Anchorage.——Dr. Christopher C. Cox died in Washington, D.C., Nov. 25th, 1882.——ILLNESS OF SIR THOMAS WATSON.—Sir Thomas Watson is seriously ill and not expected to recover. He is now ninety-one years old. A stroke of paralysis has prostrated him, but left him in possession of his mental faculties. When stricken down, he calmly remarked to an attendant: "This is the beginning of the end." He has the sympathy and affection of medical men throughout the world.——Dr. Oliver Wendell Holmes is, it is said, to receive the degree of Emeritus Professor of Anatomy from Harvard.——Surgeon-General Barnes' health gives signs of slow improvement. He now goes out of the house, and his physicians are very much encouraged. Dr. J. J. Wood. ward (who was also one of President Garfield's physicians), who has been ill for several weeks, has shown such signs of improvement for several days as to inspire his friends with hopes of his recovery.——Hæmophilia is said by the *British Medical Journal*, to be the disorder from which H. R. H. Prince Leopold suffers from time to time. He is just now recovering from some attacks of hæmorrhage.——KOCH'S BACILLUS.—Dr. H. F. Formal, of Philadelphia, after an elaborate series of investigations, is led to believe that there is no truth whatever in Koch's views as to the Bacillus of Tubercle. His report is very complete and commendable.——A NEW MEDICAL COLLEGE AT SAN FRANCISCO.—A new building has been erected by Dr. L. C. Lane, at a cost of about $85,000, on a lot worth $15,000, and conveyed by him as an unreserved donation to the Cooper Medical College, which is a reincorporation of the Pacific Medical College, the Faculty of which remains unchanged. The college is named after Dr. Elias S. Cooper, now deceased.——A NOVEL USE FOR PEPSIN.—Dr. Hollman (*Nederland Weekblatt*, 18, p. 272) has used an aqueous solution of sixteen grains of pepsin as an injection into the bladder of a patient who had hæmaturia, and in whom a catheter failed to empty the bladder. A few days later, a dark, viscid, fetid fluid readily escaped through the catheter.——AN EPIDEMIC OF TYPHOID FEVER AT PROVIDENCE, R. I.—Typhoid fever is said to be prevailing extensively at Providence, R. I. The fever began to manifest itself early in the fall, and seemed to spring up immediately after the continuous and heavy rains which visited that section of the country then. The disease is not confined to the city. In East Providence nearly fifty cases were reported last week, while some have gone so far as to credit Providence with two thousand cases of various kinds of fever. The figures are, no doubt, rather too large.—*Record.*——HORACE GREELEY IS DEAD.—Now that this much is admitted, we have reason to hope that the time is not far distant when they will go still further, and acknowledge vaccination to be a mouldy fallacy that was born of the ignorance and superstitions of a past age.—*N. Y. Medical Tribune.*——INFANT OVARIOTOMY.—Dr. Hingston, of Montreal, recently removed an ovarian tumor from a child two years of age. The patient is doing well at last account.

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EDITORIAL.

FORCING THE DISCLOSURE OF PROFESSIONAL SECRETS.—The Italian parliament seems to be emulating in its dealings with physicians the worst government that ever disgraced England, that of James II. That government executed a surgeon for refusing to betray a political criminal whose wounds he dressed; and the Italian parliament has passed a law compelling every physician to notify the police authorities of any case to which he has been summoned, which is the result of violence. Against this law Dr. Taurassia. (*Gazetta Medica-Italiana-Lombardia*) has recently very strongly protested. While no physician will object to aiding, still no infringement of the confidential nature of professional communication should be permitted.

Witchcraft in Medicine.—It seems to be the prevalent opinion that people no longer believe in witches, and therefore resort to physicians in lieu of "witch doctors." Belief in witchcraft is still, however, prevalent among the negroes, under the form of voudooism. A voudoo "doctor" was recently called upon by a patient with an ulcerated leg. He informed his patient that this was due to a lizard in the leg, and told him that the only means of cure would be to cut the limb open and let the lizard out. The patient consented, whereupon the "Doctor" split the tibia with an axe. No lizard was found, and the "Doctor" decided it was a case of "absent phenomenon." The limb had to be amputated, and it was with difficulty that the patient's life was saved. The "Voudoo doctor" had, meanwhile, become "an absent phenomenon." In certain districts of Pennsylvania and Maryland, the witch and witch doctor are recognized institutions, and new-born children who are not symmetrically developed are subjected to various charms; and cases of cholera infantum are treated after long residence in the open air in like manner, with, as might be expected, some success occasionally. When such gross medical superstitions are so prevalent at this late day, it is scarcely astonishing that patent medicine men should make colossal fortunes.

Nitro-glycerine, or as it is euphemistically called, glonoine, is at present attracting attention. First introduced in medicine by the homœopathists, it has been found very useful in gynæcological practice. Korczynski (*Schmidt's Jahrbücher* No. 2, 1882) has employed from one to six drops of the first centesimal solution, that is a solution of one part glonoine in one hundred of the vehicle. Two or three minutes after its administration the cardiac impulse is increased, the murmurs are stronger, the arterial tension is lowered. These symptoms disappear within three quarters of an hour. Two drops of the same solution often produce a violent headache with facial congestion. Six drops cause photophobia, painful cephalic beatings at each pulsation, ringing of the ears at each respiration. Mental or physical work was impossible. In asthma and angina pectoris he had excellent results from it. In the latter affection it answered equally well, whether the disease was an essential neurosis or due to to a valvular lesion. In cases of this kind it has shown a certain amount of prophylactic power. In chorea and mercurial trembling the results were less satisfactory.

A New York Penal Code Prescription.—The following prescription was recently filled on Sunday in New York: ℞ Fol. nicot. aquæ qs. Make cigars No. IV. Take as directed.

Excision of the Lung.—Gluck of Dantzig following up his previous experiments (*Berliner Klinische Wochenschrift* No. 45), has (*Berliner Klinische Wochenschrift* July 17th, 1882), exsected one lung from sixty animals; cows, pigs, dogs and rabbits. The majority of the animals not only survived the operation but the remaining lung increased in size and became compensatorily hypertrophied, as in some cases of pulmonary cirrhosis from atelectasis. Pneumothorax resulting from the operation soon disappears. Gluck believes that the indications for the operation would be found, in man, in grave pulmonary traumatisms, irritative foreign bodies and primitive caseous patches. Apropos of the latter it may be remarked that Dr. C. Fenger of Chicago (*American Journal of the Medical Sciences* 1881), excised an echinococcus which had produced extensive pulmonary gangrene. The patient perfectly recovered. Tubercular cavities have been opened once and the lung has been once incised for gangrene but in both cases unsuccessfully. For these reasons there is not so much absurdity in the excision proposal as seems to be imagined by the editors of the *Union Médical.*

Sodium Nitrite in Epilepsy.—Acting upon the experience of Dr. Law (*Practitioner*, June, 1882), Dr C. H. Ralfe (*British Medical Journal* December 2d, 1882), has used sodium nitrite in seventeen cases of epilepsy, and from his experience with the drug is of opinion that those cases in which potassium bromide is of marked service are not suitable for a trial of sodium nitrite. The cases with which potassium bromide does not agree are benefited by sodium nitrite. In certain cases it is of benefit as a change medicine. In petit mal and nocturnal epilepsy, especially of children and youths, sodium nitrite is especially beneficial. On the discussion of the paper Dr. Gowers said he had found but little effect from the sodium nitrite.

Dr. Ramskill had had similar experience, and was of opinion that in certain cases sodium nitrite had a poisonous action. This was also the case with the experience of Drs. Hughlings-Jackson and Broadbent. Dr. Broadbent thought that sodium nitrite had but little relation chemically or physiologically to amyl-nitrite or glonoine (nitro-glycerine). He was of opinion that in epilepsy there existed two conditions of the circulation, high tension and low tension. The latter condition appeared to indicate sodium nitrite. Dr. Wilks was of opinion (and in this he is certainly right), that almost any new remedy or procedure or disease might temporarily arrest the convulsions. Dr. Dowtry Drewitt said that a seton in the neck was of benefit; with this Dr. Wilks' experience agreed. Dr. Buzzard believed that if potassium bromide failed, it was because that it was not properly given. None of the speakers seemed to be aware that potassium bromide, as has been pointed out by Stark (*Allgemeine Zeitschrift für Psychiatrie*, Band XXXI.,) Bannister (*Journal of Nervous and Mental Disease*, 1881), and Spitzka (*Journal of Nervous and Mental Disease*, 1881), sometimes aggravates the epileptic condition and produces certain types of insanity not hitherto existent.

PEARL DISEASE OF CATTLE.—Dr. Johne of Dresden ("Handbuch des Offentlicher Gesundheitswesens"), claims that the pearl disease of cattle (perkucht) is simply tuberculosis of the serous membranes, especially the pleuræ, and is capable of conveyance to man through the milk of affected cows, in which opinion Dr. Esser agrees. In the early stages of the disease it is not communicable by ingestion of affected flesh, and hence he would prohibit the sale of flesh from tuberculous cows which fail to fatten, as in these the disease has become general.

CALCIFIED PERICARDIUM.—Ossified pericardia while not unique are not so frequent as to preclude mention of the case reported by Dr. G. Rivet (*Progrès Médical*, December 9th, 1882). A patient resident for some years at the Salpêtrière in consequence of senile insanity had during the greater part of that time presented nothing calling for special mention. Suddenly cardiac dyspnœa and anasarca made their appearance, and the patient died. On autopsy the pericardium was found to be converted into a calcareous capsule with scattered patches of atheromatous membrane.

NOT STAB WOUNDS BUT PNEUMONIA.—"On election day, as Matthew J. Kennedy was passing through Battery place, he was stabbed twice in the right side by James Sheehan. Kennedy died on Nov. 15th. Coroner Knox held the inquest. Deputy Coroner Donlin testified that he made an autopsy and found that death was caused by acute pleuro-pneumonia, and that the stab wounds had not accelerated the disease.' On this evidence Coroner Knox discharged Sheehan."—*N. Y. Sun.*

This is a very fair sample of the danger and absurdity of having non-medical coroners.

A man is stabbed in the lungs, when perfectly well. The wound becomes dangerous; the tissues become inflamed; pleuro-pneumonia traumatica is developed; the patient dies; and the assassin is released, because his victim died, not from the murderous stab received, but from pleuro-pneumonia! And what induced that pleuro-pneumonia?

WHERE $2600 OF PUBLIC MONEY WENT. — Fourth Auditor Beardsley says, in his annual report, that the appropriation of a sum in gross for the entertainment of the Board of Visitors at the Naval Academy is unwise, and the following bill of items is given as an illustration, it having been made at the last meeting of said Board:

Carriages	$106 00
Barber	15 00
Cards	4 57
Umbrellas, &c.	37 17
Glass	6 52
Flowers	13 37
U. S. Naval Storekeeper	25 36
China	205 56
Servants	208 16
Newspapers	4 50
Ice	23 76
Telegraphing	6 67
Tinware	6 23

Freight	4 38
Washing	12 00
Groceries	269 97
Meats	207 55
Fish	45 47
Vegetables and fruit	82 10
Ice cream and cake	61 75
Wine, liquor and mineral waters	589 16
Cigars	252 12
Total	$2,189 76

The remainder of $2600 appropriated was exhausted in the payment of mileage.

The physicians, if not the politicians, will read the above statement with surprise and a smile. Congressmen undertake the scientific work of a scientific examination of naval cadets, and in this quiet, severe mental ordeal they spend $269 for groceries, $589 for liquors and mineral waters, $252 for cigars, $205 for china, $4.50 for reading matter, and only $12 for washing for the whole party. This is an exhibit sufficiently disgusting to shame the most obtuse and hardened word demagogue, and whiskey swilling "worker." It is a national disgrace.

TEACHING BY MEDICAL LECTURES. — When Dr. Morel McKenzie, of London, was in this country, he was asked to lecture at Bellevue Hospital Medical College, and he chose the subject of diphtheria for his discourse.

He commenced his lecture by saying that, in his judgment, the day for teaching students by medical lectures was past; for that such a method "had had its day;" that it was once necessary, but that in this era of abundant and cheap medical books, such a mode of teaching was unnecessary, and was even a waste of time.

These views have been commended by a portion of the medical press, *unconnected with medical colleges, of course*, as just, sensible and proper. Is there, however, any correctness whatever in such a claim? Has the day for teaching students by medical lectures gone by, and is this method injudicious and unnecessary?

Much might properly be said here as to the very bad taste of Dr. McKenzie, in using such an occasion, and such an audience, with a Faculty of college teachers at hand, for the advocacy of his peculiar views upon this subject; but this would be irrelevant to the subject at issue, and will be therefore omitted. It is, however, a point very worthy of note.

As to the teaching of anatomy without demonstrations or oral lectures, or explanations upon the piece dissected, the time will never come, can never come, when such teaching may be properly or sensibly condemned. It is the only mode of teaching anatomy properly. Teaching, or even trying to teach it, without the dissections is not only injudicious, but it is nonsensical. Students may so learn anatomy as to answer the most difficult questions with a marvellous correctness and rapidity. But what is such teaching worth? The best students, under this method, cannot "take up" a single artery; cannot place the knife upon a single portion of the dissected subject and say what he sees or what he touches. Under such circumstances, what does such a student really know of anatomy? Nothing, practically; absolutely nothing. Such teaching "by the books," or such learning from the books, without a teacher, is absurd and ridiculous. Anatomy, then, can never be taught without the proper means, and these are to be found only in a medical college. The student must dissect; he must have dissections explained, and it matters not by what name such explanations are called; they are practically lectures upon anatomy. If anything in this connection is to be condemned, it is not the college method of teaching anatomy, but the folly of those who claim that any other method is possible.

The same is true of physiology. It must be illustrated either upon living matter, or by the best charts and drawings, carefully explained by a master. As to reading physiology, and attempting to master it by "tuppeny" wood-cuts, such an effort is as absurd as is the advice to ever make such an attempt. What a student ever knows usefully of physiology, he learns by the illustrated lectures of an expert or master in a medical college. Besides all of these facts, which are so evident as not to need demonstration, every book on physiology contains very much that is irrelevant, obsolete and incorrect. There is no exception to this rule. The best physiologists teach what is not to be found in their own books; and refuse to teach, as untrue, what is found in their books. No author on this subject can prevent such a condition, for in the period of time elapsing between the issue of his several editions, the great science of physiology is never still. Errors are being discovered and eliminated; and new and great truths are being established and adopted. How can any one's book on physiology be *au courant* with the science, as taught in the lecture-room by an expert and a master? Learning or teaching physiology from a book may be tolerated in science schools, where physiology is taught only as an element in a polite education; but for physicians, or those soon to be physicians, to be so taught, it is worse than ridiculous; it is dangerous.

Who can teach or has ever undertaken to teach pathology from a book? Virchow has just said, "that even with the actual specimens carefully exhibited to ten, nine fail to see it." This is the experience of a master of the master, and with a carefully trained class of accomplished German students. How much of pathology can an ordinary teacher, with the average class of students in this country, or indeed in any country, teach without the specimens; that is, from a book? And how much can the students learn from any book without an able and experienced teacher? How much is dependent upon a proper learning and teaching of pathology in learning the practice of medicine, and surgery, and the diseases of women? Indeed, how much is dependent upon a thorough learning of pathology for one even to understand all or any of the practical branches of medicine?

If the practitioner, or even the recent graduate, must learn pathology in order to learn his daily business (the practice of his profession), and if, as Virchow says, it is difficult to teach pathology even with the specimen exhibited, what is to be said of those who claim that pathology, and all branches comprehensible only by a comprehension of pathology, are to be taught, and to be learned from a book? Is the day, then, for teaching from the specimen plates, from the dead body, from the morbid piece, past? Can one discuss such an absurd claim or allude to those making such claims, with politeness and courtesy? It is difficult to do so.

What can be learned of obstetrics from the books? Without the manikin, the clinics, the enlarged drawings carefully explained, the instruments used exhibited and explained, what does the student in a college learn? Away from a college, what can he learn?

Is there any one, living or dead, who ever learned anything of chemistry from a book? If there be such a one, his name ought to be bulletined to the world; and a post-mortem or ante-mortem monument (as the case may be) erected to his memory! The world has had a Cæsar in war; a Washington in peace; a Bonaparte in ambition; a Milton in poetry; a Thume in history; a Borzia in revery, etc.; but a chemist from a book! Ah! a young chemist! When will this be, or when can it be?

Besides all of these manifest facts, so familiar, does not every one know that in the great branches, the practice of medicine, and surgery, and obstetrics, and diseases of women, that the books are all padded; filled with obsolete and foolish and even dangerous doctrine? When the best teachers, the gray-haired practitioners, the men of the best and most matured judgment, in reading these books, scarcely know what to believe, what to accept, what to adopt, what is the poor pupil to do? Who shall give him, as a child in medicine, the golden secret of judgment and experience? Who can do so? That blessed secret which so few of his gray-haired seniors ever acquire? Shall the child work at birth? But more than this, shall he reason before he is actually born? Away, then, with such dangerous, such foolish heresy!

What is needed is better colleges, better college work and more of it. If, with the colleges, so little is known that the young physician ought to know, shall he know more if the colleges be abolished? Quench these lights, and of course the darkness will disappear! Such is the claim—in its entire absurdity and manifest folly! The lamps do not burn sufficiently brilliant. Quench them, and we shall have light!

ASTOR HOUSE OFFICE.—For the convenience of all visiting friends and those doing business with this journal, the editor has taken an office, permanently, at the Astor House: room 77. Every surface car, elevated rail car, and stage passes the Astor House, or comes within one or two "blocks" of it. It is the most central and convenient locality in the city. Send all letters and packages to P. O. Box 1124.

BACILLUS GYNOPHILIA.—The origin of this dread disease, commonly known under the title of "love of the opposite sex," has recently been discovered by a California physician (*Washington Post*), to be a bacillus. This has been cultivated, and certain persons inoculated with it, with the following results:—The inoculation was invariably successful, symptoms of the disease appearing in a very short time after the operation. A bachelor, an inveterate woman-hater, aged fifty, the first day after inoculation had his whiskers dyed, ordered a new suit of clothes and a set of false teeth, bought a top buggy, a bottle of hair restorer, a diamond ring and a guitar, and began reading Byron's poems. The inoculation produced symptoms of the same nature in a young lady of forty-five. She spent five dollars at a drug store for cosmetics, bought a lot of new hair and a croquet set, sang "Empty is the cradle," sent out invitations for a party, and complained that the young men did not go into society. An inoculated youth of seventeen, employed in a country store, did up a gallon of molasses in a paper bag, put the cat in a butter tub, and threw some fresh butter out of the window. Finally, he sat in a basket of eggs while looking at the photograph of a pretty girl, and was discharged for his carelessness.